Studies in

BRITISH URBAN GEOGRAPHY

by

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INTRODUCTION.

In 1931 only one fifth of the population of Great Britain lived in the Rural districts and the remaining four fifths lived in the Urban Districts. This, in itself, is sufficient reason for devoting more attention than has been customary to the present distribution and characteristics of the towns of this country.

In 180. there were only 58 towns in Great Britain with more than 10,000 inhabitants[1] and together they contained two and a quarter million people, who formed a fifth of the total population. (Figs. 1 and 2). By 1851 the number of towns with more than 10,000 inhabitants had risen to 144 and their population to nearly eight millions, or nearly two-fifths of the total. In 1931 there were 572 such towns, containing all together thirty-two million people, or seven-tenths of the total population. Half the people lived in towns with more than 100,000 inhabitants, whilst nearly a fifth lived in Greater London.

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(1). The sources on which the following statements are based are given in Tables 1 - 7.

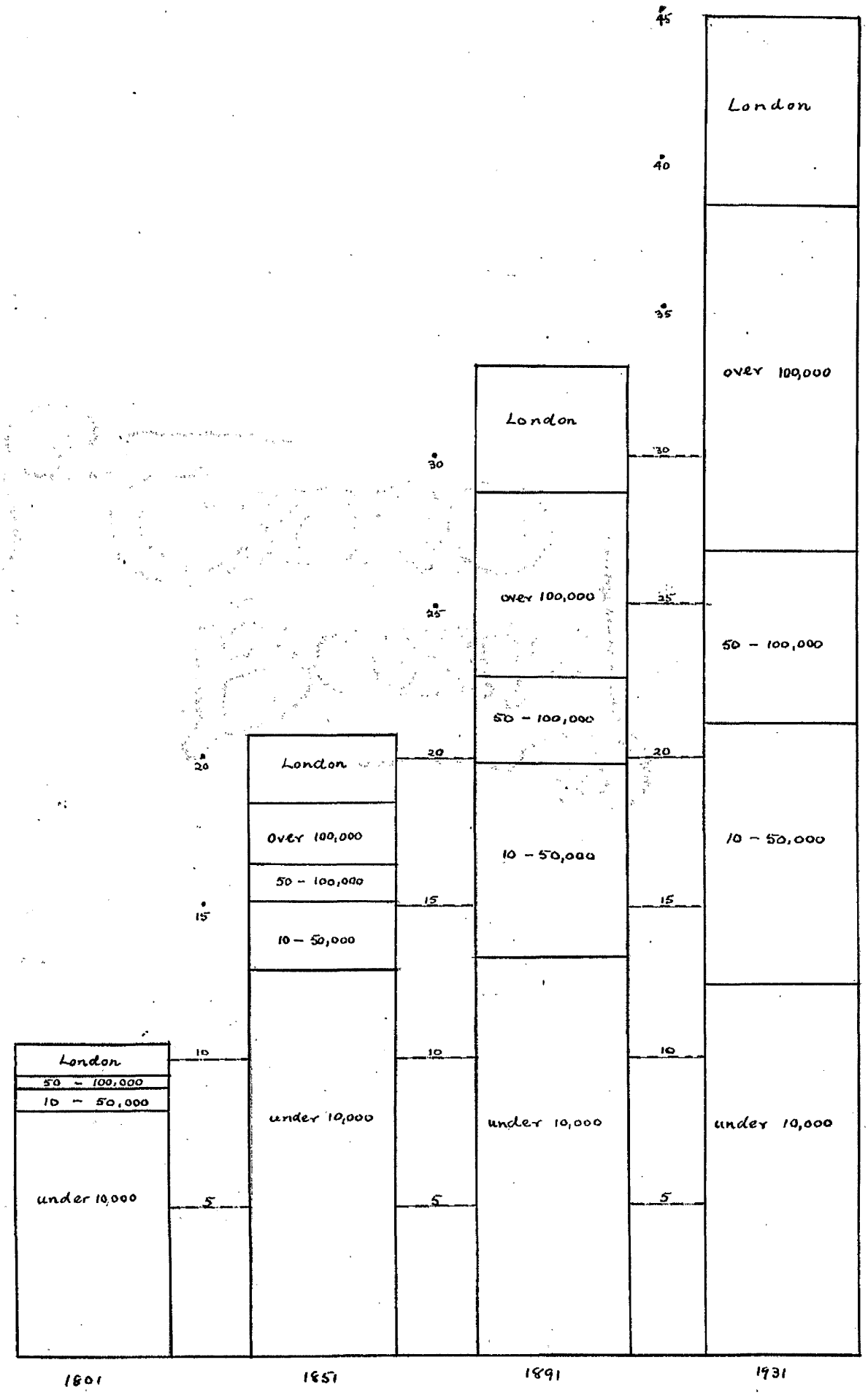

Fig.1. Population of Great Britain in millions.

~~lived in Greater London.~~

From 1801 to 1931, the number of people in towns with more than 10,000 inhabitants multiplied by fourteen, whilst the numbers in the smaller towns and the country-side ~~had~~ only increased by half. ~~(Fig.3.)~~

The basis of classification into urban and rural population has varied, so the statistics are not directly comparable from census to census, but they reveal even more striking changes. In 1851 the urban total was nearly ten and a half millions, half the total population. (Fig.3~~BB~~). In 1951 the population classed as urban, amounted to almost thirty six millions or four-fifths of the total. During the same period the population classed as rural actually decreased from over ten to under nine millions. Obviously the great increase in the population of these Islands in the last eighty years has been entirely due to town development and consequently the maintenance of the population in comfort, either at its present level or with such expansion as seems probable in the near future, depends entirely on the prosperity of the towns.

These striking facts are not to be attributed entirely to increasing industrialisation, though that has been important. They represent the sum of the effects of cheaper and more flexible transport, which has encouraged increasing/

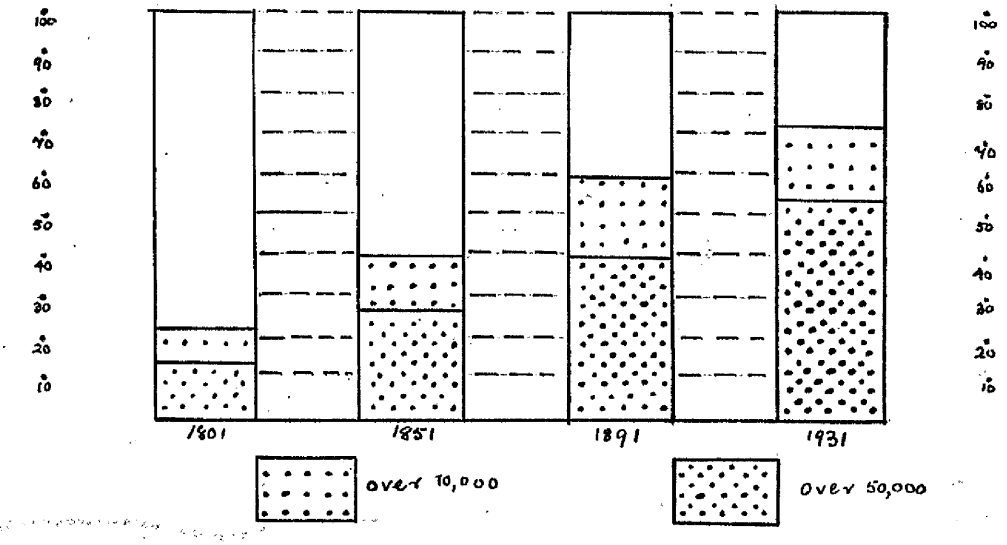

Fig.2. Percentage of the population of Great Britain in towns with over 10,000 and over 50,000 inhabitants.

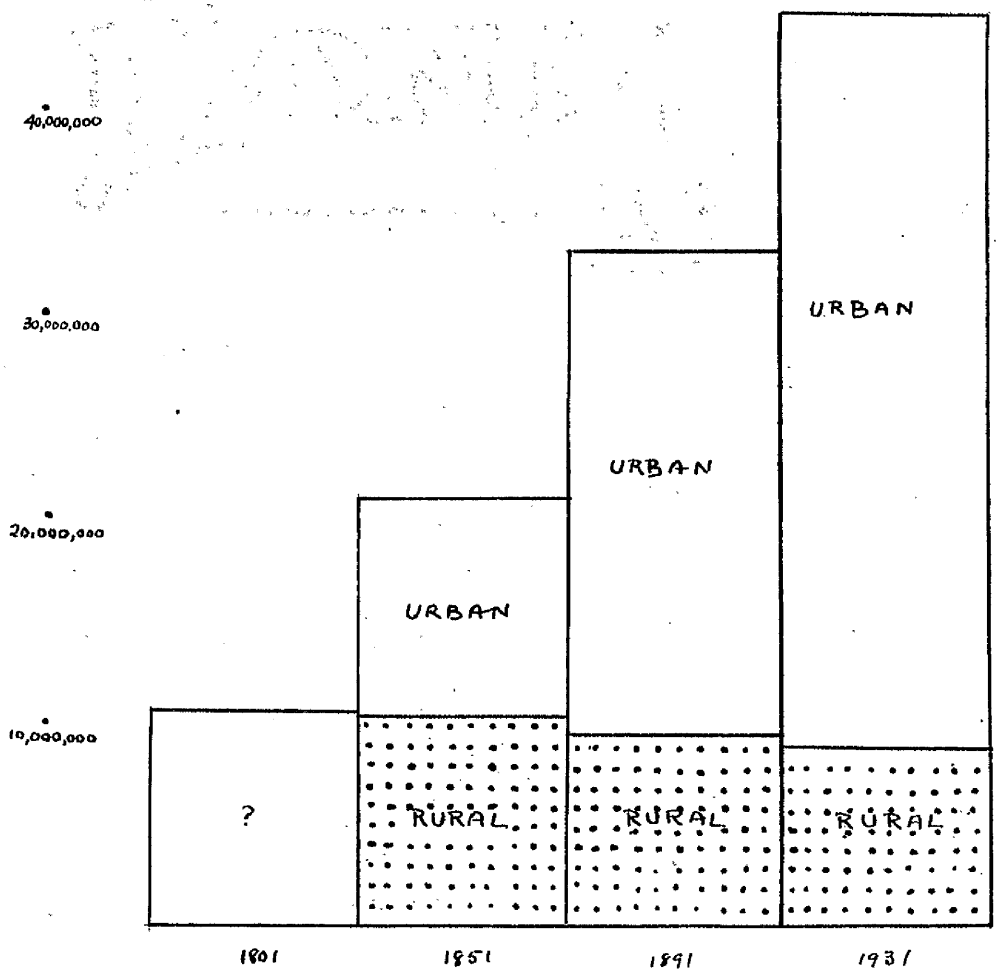

Fig.3. Total population of Great Britain and the numbers returned as Urban and Rural.

increasing centralisation of all activities, except those concerned with the cultivation of land or the exploitation of minerals. Such activities cannot be concentrated at a site but must be dispersed over the area of the farmlands and of the workable coal seams respectively.

The characteristic concentration or dispersal of the different activities are of course, reflected in the distribution of the people associated with them, and so give rise to the fundamental distinction between urban and rural population. The people concerned with exploiting an area will be spread more or less evenly over it with a density that is related to the productivity of the area. On the other hand, people concerned with utilizing the value of a site, whether for manufacturing, or for the numerous and varied activities which tend to cluster round a route focus, concentrate around the site and form a town in which the number of people is adjusted to the use made of the site. The two dominant numerical aspects of the distribution of population, the density of rural population, and the total population of towns are particular reflections of the relation of the population in the one case, to an area and in the other, to a site.

There is not only a contrast in the distribution of the two sections of the population, but also in the relation between the dwelling areas and the work places. The/

The rural settlements occupy a small space in comparison with the area over which the workers spread and people disperse from the settlements to their work. In the case of coal-miners the dispersal is underground after a preliminary concentration at the shaftheed. The residential areas of towns, on the other hand, are more extensive than the districts in which the functional activities are carried on, and the urban workers converge from their homes to their work places.

The number of people in a town who are engaged in manufacturing goods and providing various services may be compared to the resultant of forces acting at a point. The only limit to the number of people employed at the site is the magnitude of the forces, that is of the demands for goods and services, which focus at the point, either naturally or as the result of human effort and organisation.

The example of the Greater London shows that such forces may produce a concentration of over eight million people around one centre, and there is no reason to suppose that the limit has been reached even in the case of London. Although there may be a limit to the size of a town under the present systems of transport and economic organisation, it is so high that it has not yet become/

become effective. As the number of people in a conurbation increases, distance between the outer residential areas and the working districts tends to become excessive, but this tendency can be overcome either by improved transport or by increasing the density of population in the existing area, by the substitution of flats for houses. The limit to the number of people who could work and be housed in a moderate area, with skyscraper offices and skyscraper flats, is not yet known, but in Manhattan Island, in 1930, 2.3 million people lived in an area of 22.2 square miles, a density of over 100,000 per square mile.

The preponderance of towns has a very important bearing on the idea of optimum population. The existence of chronic unemployment suggests the desirability of reducing the population, and it is argued that the total should be commensurate with the size of the country. This ignores the fact that only the agricultural section of the population is dependent on the products of a specific area. In an agricultural community the area available affects the total possible production which in its turn is a factor determining both the maximum population, which expresses the relation between the maximum output and the lowest possible standard of living, and the optimum population, the number of people necessary/

necessary to maintain production at the highest level per head. The contrast between these two standards lies behind rural depopulation. With the demand for a higher standard of living rural population naturally tends to decrease and to approach the optimum density. In districts such as the Highlands of Scotland, there has been a great decrease of population, associated with a smaller decrease in production and a consequent rise in the standard of living for those who remain.

Such considerations, which assume a fundamental relation between population and a specific exploited area, have no bearing on the population problem of towns or of an industrialized country as a whole. The output and employment capacity of a factory bears no relation to the area of the town in which it is situated or to any fixed tributary area. Raw materials can, if necessary, be brought from the other side of the world and the crucial factor is the extent of the demand for goods or services that can be made to focus on a particular factory, town or country. The great increase of population in Lancashire during the last century and a half was based on the fact that the rapidly increasing demand for cotton goods from a large part of the world was induced to focus on that county. The difficulties today are due to a large/

large proportion of that demand being diverted elsewhere, and are obviously not connected with the area of Lancashire. Although, in such a specific case it is easily seen that there is no relation between the total industrial population or its prosperity, and the area of the region in which it lives, this principle is frequently overlooked by those who consider the situation of the country as a whole.

Whilst it must be admitted that a closer adjustment of the population of this country to the demand for labour is highly desirable, it is as well to realise that the adjustment has to be made to variable demands and not to a fixed area. Unfortunately the adjustment is always provisional, never final, and the variations of demand are rapid whilst the adjustment of population is slow. Such instability of demand ignored by the protagonists of the "optimum population", is felt in its most concrete form by the urban workers in the spells of unemployment that result from any diminution of demand on the factories.

There is consolation in realising that adjustment between population and the demand for labour can be attained by working to increase and stabilise the demand without waiting for slow alteration in the number of people concerned.

Similar considerations apply to the distribution of the people within the country itself. There can be no optimum/

optimum distribution of population except in relation to current demands for labour. The population will naturall move into areas of increasing demand, hence the rapid growth of certain dominant centres, particularly Greater London; the population of which increased by three quarters of a million in the ten years 1921 - 31. A decision as to whether, and to what extent, it would be beneficial to divert some of this demand to other areas where the demands for labour are decreasing must be considered from the sociological as well as the economic point of view, but any decision must be based on a thorough understanding of the geographical factors and of the adjustments which have so far operated freely.

It is hoped that the following study will lead to an understanding of the many different types of town in this country, of the variety of factors that have contributed to their growth and present position.

AIMS, METHOD AND SCOPE.

The object of the present study is to investigate the sizes and functions and the distribution of the towns of Great Britain in relation to geographical conditions, and to elucidate the very varied forces that have drawn together large groups of people in urban communities. The relations of the towns to geographical and economic conditions vary with their activities.

Broadly speaking, but with reservations that will be investigated later, the number of inhabitants in a town reflects the extent of the demand for goods and services which is concentrated on that town. The proportion of people employed in the different productive industries and in the provision of various services is an index of the relative importance of those industries and services in attracting and maintaining the population of the town.

It is comparatively simple to classify towns into types, on the basis of their activities, quite independently of their total population by studying the proportion of people employed in the different groups of industries. A more important problem for the geographer is to investigate the factors that have led to the accumulation of a certain number of people in each town, and to try to see in what way that number is related to present day conditions/

conditions and trends and so to provide a basis for estimating the probable future of the town; whether the population is likely to remain stationary, to continue to increase, or to decrease in face of the decreased effectiveness of the factors that led to its growth and the failure of other factors to take their place.

The available information is contained in the Industry tables of the Censuses for 1931 (1) (2). The industry tables are used instead of the occupation tables because the present investigation is not concerned with the occupations of the individuals, but with the groups of people, of various individual occupations, who derive their living directly from each industry carried on in a town. Similarly returns based on place of residence and not on place of employment are the only ones that will throw light on the distribution of population.

The type of information available for towns of over 50,000 inhabitants, in England and Wales, and for the twenty four "Large Burghs" in Scotland is indicated in the following abstracts (3) and (4)

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(1) Census of England and Wales, 1931. Industry Tables.
(2) Census of Scotland, 1931. Vol III. Occupations and Industries.
(3) Census of England and Wales, 1931. Industry Tables. Table 2, pp. 12-20.
(4) Census of Scotland, 1931. Vol. III. Occupations and Industries. Table 16, pp. 826-897.

Abstract from

Census of England and Wales 1931
Industry Tables.

TABLE 2. (pages 12 to 161)
INDUSTRIES. (Full List). MALES and FEMALES aged 14 years and over, exclusive of "OUT OF WORK". ENGLAND and WALES, REGIONS, ADMINISTRATIVE COUNTIES, COUNTY BOROUGHS and other URBAN AREAS with populations exceeding 50,000.

Note: (1) The areal classification is by each persons area of enumeration and not necessarily, therefore, by area of business.

ENGLAND and WALES.	MALE	FEMALE
Total Population - All Ages	19,133,010	20,819,367
Aged 14 years and over:		
Total Population	14,632,859	16,410,894
Unoccupied and Retired	1,385,526	10,804,851
Out of work (excluded from Industry classification)	1,683,742	483,064
Total in Industries (excluding Persons Out of Work)	11,563,591	5,122,979
I. FISHING. (2 Headings)	34,134	1,401
II. AGRICULTURE. (3 Headings)	905,181	56,109
III. MINING AND QUARRYING, AND TREATMENT OF NON-METALLIFEROUS MINE AND QUARRY PRODUCTS. (2 Sub-Orders) (10 Headings)	974,866	9,148
IV. MANUFACTURE OF BRICKS, POTTERY, GLASS, etc. (5 Headings)	155,300	49,089
V. MANUFACTURE OF CHEMICALS, DYES, EXPLOSIVES, PAINTS, OILS, GREASE. (5 Sub-Orders) (22 Headings)	142,693	49,919
VI. MANUFACTURE OF METALS, MACHINES, IMPLEMENTS, CONVEYANCES, JEWELLERY, WATCHES. (10 Sub-Orders) (99 Headings)	1,503,620	258,180

		MALE	FEMALE
VII.	MANUFACTURE OF TEXTILES AND TEXTILE GOODS (NOT DRESS) CELLULOSE. (7 Sub-Orders) (33 Headings)	408,530	555,475
VIII.	PREPARATION OF SKINS AND LEATHER, AND MANUFACTURE OF GOODS OF LEATHER AND LEATHER SUBSTITUTE (NOT CLOTHING OR FOOTWEAR) (2 Sub-Orders) (7 Headings)	50,554	23,614
IX.	MANUFACTURE OF CLOTHING NOT KNITTED (17 Headings)	289,919	487,043
X.	MANUFACTURE OF FOOD, DRINK, TOBACCO. (3 Sub-Orders) (25 Headings)	352,616	206,356
XI.	WOOD WORKING; MANUFACTURE OF CANE AND BASKET-WARE, FURNITURE, FITTINGS (NOT ELSEWHERE ENUMERATED) (2 Sub-Orders) (12 Headings)	210,930	27,873
XII.	PAPER MAKING; MANUFACTURE OF STATIONARY AND STATIONARY REQUISITES; PRINTING BOOK-BINDING AND PHOTOGRAPHY. (3 Sub-Orders) (18 Headings)	270,664	140,457
XIII.	BUILDING, DECORATING, STONE AND SLATE CUTTING AND DRESSING, AND CONTRACTING. (5 Headings)	836,408	10,385
XIV.	OTHER MANUFACTURING INDUSTRIES. (3 Sub-Orders) (20 Headings)	119,242	65,678
XV.	GAS, WATER, ELECTRICITY. (8 Headings)	202,892	6,815
XVI.	TRANSPORT AND COMMUNICATION. (7 Sub-Orders) (36 Headings)	1,113,527	38,501
XVII.	COMMERCE AND FINANCE. (63 Headings)	1,935,407	833,950
XVIII.	PUBLIC ADMINISTRATION AND DEFENCE. (3 Sub-Orders) (8 Headings)	1,023,675	354,3[illegible]

		MALE	FEMALE
XIX.	PROFESSIONS. (16 Headings)	293,619	275,959
XX.	ENTERTAINMENTS AND SPORT. (7 Headings)	100,859	48,166
XXI.	PERSONAL SERVICE (INCLUDING HOTELS AND CATERING, BUT EXCLUDING GOVERNMENT AND LOCAL AUTHORITY) (16 Headings)	628,117	1,617,599
XXII.	OTHER INDUSTRIES OR INDUSTRY NOT STATED. (3 Headings)	30,938	7,804

Abstract from

Census of Scotland, 1931. Vol. III.
Occupations and Industries.

Table 16 (pp. 320-397)
Industries of Males and Females, aged 14 years and over, in Cities, Counties and Large Burghs.
NOTE. Persons "Out of Work" are included in their respective Industries. The "Retired" are not included in this tabulation.

		Both Sexes.	Male.	Female.
	ALL INDUSTRIES.	2,321,375	1,554,026	667,349
I.	FISHING (2 Headings)	21,847	21,585	262
II.	AGRICULTURE. (9 Headings).	176,732	160,545	16,187
III.	MINING AND QUARRYING TREATMENT OF NON-METALLIFEROUS MINE AND QUARRY PRODUCTS. (2 Sub-Orders) (10 Headings.)	146,397	144,179	2,218
IV.	MANUFACTURE OF BRICKS, POTTERY, GLASS, etc. (5 Headings).	15,043	12,468	2,575
V.	MANUFACTURE OF CHEMICALS, DYES, EXPLOSIVES, PAINTS, OILS, GREASE. (5 Sub-Orders). (22 Headings)n	21,200	17,177	4,023
VI.	MANUFACTURE OF METALS, MACHINES, IMPLEMENTS, CONVEYANCES, JEWELLERY, WATCHES.	280,320	263,481	16,839
VII.	MANUFACTURE OF TEXTILES AND TEXTILE GOODS (NOT DRESS): CELLULOSE. (7 Sub-Orders) (33 Headings).	152,374	51,711	100,663

		Both Sexes.	Male.	Female.
VIII.	PREPARATION OF SKINS AND LEATHER, AND MANUFACTURE OF GOODS OF LEATHER AND LEATHER SUBSTITUTE (NOT CLOTHING OR FOOTWEAR). (2 Sub-Orders) (7 Headings)	5,816	4,299	1,517
IX.	MANUFACTURE OF CLOTHING (NOT KNITTED). (17 Headings).	46,586	18,808	27,778
X.	MANUFACTURE OF FOOD, DRINK, TOBACCO. (3 Sub-Orders) (7 Headings).	92,551	53,179	39,372
XI.	WOOD WORKING: MANUFACTURE OF CANE AND BASKET-WARE, FURNITURE, FITTINGS (NOT ELSEWHERE ENUMERATED) (2 sub-Orders) (12 Headings).	44,818	39,830	4,988
XII.	PAPER MAKING, MANUFACTURE OF STATIONARY AND STATIONARY REQUISITES: PRINTING BOOK-BINDING AND PHOTOGRAPHY. (3 Sub-Orders) (18 Headings)	52,160	30,972	21,188
XIII.	BUILDING, DECORATING, STONE AND SLATE CUTTING AND DRESSING, AND CONTRACTING (5 Headings)	101,742	98,362	3,380
XIV.	OTHER MANUFACTURING INDUSTRIES. (3 Sub-Orders) (20 Headings)	24,494	16,541	7,953
XV.	GAS, WATER, ELECTRICITY. (3 Headings)	17,496	16,807	689
XVI.	TRANSPORT AND COMMUNICATION (7 Sub-Orders) (26 Headings)	155,803	146,350	9,453
XVII.	COMMERCE AND FINANCE. (63 Headings)	363,190	228,350	134,840

		Both Sexes.	Male.	Female.
XVIII.	PUBLIC ADMINISTRATION AND DEFENCE. (3 Sub-Orders) (8 Headings)	92,551	53,179	39,372
XIX.	PROFESSIONS. (16 Headings)	77,805	39,146	38,659
XX.	ENTERTAINMENTS AND SPORT. (7 Headings)	17,141	11,992	5,149
XXI.	PERSONAL SERVICE (INCLUDING HOTELS AND CAT RING, BUT EXCLUDING GOVERNMENT AND LOCAL AUTHORITY. (16 Headings)	222,954	54,351	168,603
XXII.	OTHER INDUSTRIES OR INDUSTRY NOT STATED. (3 Headings)	32,622	21,821	10,801

Unfortunately there are differences between the tables in the two Censuses and it is not always possible to convert them into identical terms. In the Census of Scotland, persons "Out of Work" are included in the totals for the industry in which they were formerly employed but no indication of their numbers is given, except the totals for Scotland, in Table 15. In the Census of England and Wales, persons "Out of Work" are excluded from the totals in Table 2, but they are given, classified under the industries in which they were formerly employed, in in Table 4, so that it is possible to obtain a combined total of the people, employed and unemployed, who are associated with a particular industry in towns with over 50,000 inhabitants. Table 16 of the Census of Scotland, with the same twenty-two Orders, Sub-Orders and headings as in the Census of England and Wales, gives totals of employed and unemployed associated with the various ~~industrial~~ Orders in the four cities, Edinburgh, Glasgow, Dundee, Aberdeen and in each of the other twenty-four "Large Burghs", the smallest of which, Arbroath, has 17,625 inhabitants. There is no corresponding information for any smaller towns or even for the Burgh of Buckhaven and Methil which has more inhabitants than Arbroath (17,643), but is not a "Large Burgh" in terms of the Local Government (Scotland) Act, 1929.

In/

In the Census of England and Wales there is another Industry Table, Table 3, which gives separate figures under various industrial headings of those employed in each urban district, (and each rural district) with fewer than 50,000 inhabitants, but there is no corresponding table, giving the numbers of the persons "Out of Work". In this table the classification is condensed; the number of headings is only 52, instead of 329 in the full list, no Sub-Orders are given, and although the 22 Orders are indicated no totals are given for them. The form of the table is shown in the following abstract (5)

Note:(5) Census of England and Wales, 1931. Industry Tables. Table 3, p. 182.

Abstract from

Census of England and Wales, 1931.
Industry Tables.

Table 8, p. 182.
INDUSTRIES. (Condensed List) of MALES AND FEMALES aged 14 years and over, Exclusive of Persons "Out of Work".
Notes:- The areal classification is by each person's area of enumeration and not necessarily, therefore, by area of business.

		Male	Female
	BEDFORD M.B.		
	Total in Industries (excluding persons out of work)	11,311	6,932
	Out of Work (not included below)	1,195	321
I.	Fishing.	-	-
II.	Agriculture.	298	11
III.	Mining and Quarrying, and Treatment of Non-Metalliferous Mine and Quarry Products.		
1.	Mining and Quarrying	22	-
2.	Treatment of Non-Metalliferous Mine and Quarry Products (excluding Gas Works).	8	3
IV.	Manufacture of Bricks, Pottery, Glass, etc.	256	2
V.	Manufacture of Chemicals, Dyes, Explosives, Paints, Oils, Grease.		
1,2.	Chemicals and Explosives	29	7
3.	White Lead, Paints and Varnish	6	-
4,5.	Greases, Glue, etc.	15	-
VI.	Manufacture of Metals, Machines, Implements, Conveyances, Jewellery, Watches.		
1.	Smelting, Converting, Refining and Rolling of Iron and Steel.	1	-
2.	Extracting and Refining of other Metals and Alloys.	3	-
3.	Founding and Other Secondary Processes in Metal Working.	61	1
4.	Engineering (not Marine or Electrical	1,739	119
5.	Electrical Installations, Cables, and Apparatus.	851	152
6.	Construction and Repair of Vehicles.	391	40

		Male	Female
7.	Shipbuilding and Repairing and Marine Engineering.	9	-
8.	Cutlery and Small Tools (not Machine (Tools).	6	-
9.	Other Metal Industries (not Precious (Metals, Jewellery or Plate).	56	8
10.	Precious Metals, Jewellery, Plate.	22	3
VII.	Manufacture of Textiles and Textile Goods (not Dress); Cellulose.		
1.	Cotton	-	2
2.	Wool, Worsted and Shoddy.	3	-
3.	Silk, Natural and Artificial	1	-
4.	Flax, Hemp, Jute.	-	-
5,6.	Mixed Fibres and Miscellaneous Products.	24	13
7.	Textile Dyeing, Printing, Bleaching, Calendering, Finishing.	-	-
VIII.	Preparation of Skins and Leather, and Manufacture of Goods of Leather, and Leather Substitute (not Clothing (or Footwear).		
1.	Furs, Skins, Leather.	21	2
2.	Saddlery, Harness, Bags, Trunks, and Other Goods of Leather and Leather Substitute (not Clothing or (Footwear).	9	1
IX.	Manufacture of Clothing (not Knitted)	182	311
X.	Manufacture of Food, Drink, Tobacco.		
1.	Food.	306	255
2.	Drink.	122	33
3.	Tobacco, Cigars, Cigarettes, Snuff.	6	-
XI.	Wood Working; Manufacture of Cane and Basket Ware, Furniture, Fittings (not elsewhere enumerated).		
1.	Woodworking and Basket Ware.	216	13
2.	Furniture (not Metal or Basket); Fittings.	113	94
XII.	Paper-making; Manufacture of Station-ary and Stationery Requisites; Printing, Book-binding and Photography.	290	170
XIII.	Building, Decorating, Stone and Slate Cutting and Dressing, and Contracting.	814	11

		Male	Female
XIV.	Other Manufacturing Industries.	7	-
1.	Rubber.	7	-
2.	Musical Instruments.	20	-
3.	Other Manufacturing Industries	49	14
XV.	Gas, Water, Electricity.		
510- 6.	Gas Works Service.	119	7
516-21.	Water Works Service.	27	-
523- 9.	Electricity Supply Service.	177	7
XVI.	Transport and Communication.		
1.	Railways.	544	7
2.	Road.	325	8
3.	Water, Air and Other Transport and Communication.	37	2
XVII.	Commerce and Finance.		
600-670.	Distributive Trades.	2,199	1,067
680-699.	Other Commerce and Finance.	359	75
XVIII.	Public Administration and Defence.		
1.	Defence.	94	5
2.	Central Civil Government (British (and Imperial).	304	84
3.	Local Government.	646	249
XIX.	Professions.	439	576
XX.	Entertainments and Sport.	99	51
XXI.	Personal Service (including Hotels (and Catering, but excluding Government (and Local Authority.)	502	2,564
XXII.	Other Industries - or Industry not Stated.	55	15
x.	Industry not Stated (included in (Order XXII).	55	15

Use of Census Statistics.

The statistics, as published in the Censuses, are not in a form suitable for the present investigation. From the tables as they stand it is possible to study the distribution of people employed in a particular industry or section of an industry, and to compare the numbers engaged in different industries in the same town. They conceal, however, similarities of function which may exist between towns of different sizes. Although any of the detail given in the tables may be of value, the mass is quite indigestable until it has been generalised, and the significance of particular details can only be assessed in relation to the broader features which must first be investigated.

The first process of generalisation is to add the corresponding figures in the columns which give separate statistics for males and females, to obtain the numbers of people employed in each of the twenty-two Orders and also the total number employed in the administrative unit under consideration. The second stage is to calculate the proportion of the numbers in each of the Orders, to the total number employed. This transformation of totals into proportions is essential. It facilitates comparison of the relative importance of the different industries to any town, and, still more important it permits comparison of the functional "make up" of towns of/

of different sizes.

The methods used and the results obtained may be illustrated by Table 9 which is compiled from Tables 2 & 4 of Industry Tables, Census of England and Wales, 1931, and Tables 15 & 16 of Vol. III., Occupations and Industries, Census of Scotland, 1931, to give, for Great Britain as a whole, separate totals of those employed and unemployed who are returned as associated with each of the twenty-two Industrial Orders.

First the figures for Males and Females in Industry are added to obtain the total employed in Industry in April 1931 for Great Britain and for each of the twenty-two Orders. These totals are given in Column 1. The proportion of the total in each Order to the total employed in the country is given, in thousandths, in column 2. The corresponding totals for persons "Out of Work" are given in column 3, and the proportions, also calculated in relation to the total employed in the country, are given in column 4. In column 5 the proportion of unemployed to employed in each Order is tabulated.

The figures in column 1 reflect the demand for labour as it existed in April 1931, a period of depression when over 2½ million persons were "out of work" in Great Britain, a number equal to 15.0% of those working at that time. Unemployment was not evenly spread over the different Orders of industry, but, as is shown in column

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T A B L E 9.

GREAT BRITAIN.

Total Employed and "Out of Work" Persons in Great Britain, and the numbers and proportions associated with each of the Twenty-two Orders.

	(1)	(2)	(3)	(4)	(5)
	Employed.		"Out of Work"		
I.	58,308	3	9,950	1	187
II.	1,129,794	62	64,597	3	53
III.	1,094,648	58	248,396	13	228
IV.	195,774	10	33,748	2	171
V.	210,088	11	28,361	2	134
VI.	1,948,194	105	522,262	28	270
VII.	1,083,454	59	254,698	14	235
VIII.	70,351	4	12,116	1	172
IX.	819,586	44	60,148	3	75
X.	636,408	34	72,683	4	114
XI.	275,544	15	45,262	2	164
XII.	458,601	25	37,986	2	83
XIII.	920,784	50	202,010	11	221
XIV.	205,555	11	30,002	2	146
XV.	225,001	12	20,409	1	91
XVI.	1,286,055	70	157,729	8	123
XVII.	3,099,439	168	235,433	13	76
XVIII.	1,519,470	81	110,491	6	73
XIX.	642,436	34	23,716	1	37
XX.	163,388	9	34,075	2	209
XXI.	2,444,801	132	201,576	11	83
XXII.	61,695	3	123,958	7	2,010
	18,550,049	1,000	2,824,702	157	

Column (2) Proportion in each Order per 1,000 of total employed.

Column (4) Proportion of unemployed in each Order per 1,000 of total employed.

Column (5) Proportion of unemployed per 1,000 employed in each Order.

T A B L E 10.

GREAT BRITAIN.

Total employed and "Out of Work" for Great Britain and for each of the twenty two orders.

Order.	Total Employed and "Out of Work"	Proportion of Total Employed and "Out of Work" associated with the Order.	Corresponding Proportion of Employed only
I.	63,256	3	3
II.	1,248,391	59	62
III.	1,344,044	64	58
IV.	229,522	11	10
V.	238,444	11	11
VI.	2,465,456	117	105
VII.	1,328,152	63	59
VIII.	91,439	4	4
IX.	879,734	42	44
X.	709,091	34	34
XI.	320,606	15	15
XII.	496,567	24	25
XIII.	1,122,794	53	50
XIV.	235,563	11	11
XV.	245,410	12	12
XVI.	1,443,764	69	70
XVII.	3,334,872	158	168
XVIII.	1,629,961	77	81
XIX.	666,192	32	34
XX.	197,466	9	9
XXI.	2,646,377	126	132
XXII.	185,648	9	3
	21,074,751	1,000	1,000

Group 1.	Primary Production	126	123
Group 2.	Major Industries	180	164
Group 3.	Other Manufacturing Industries	152	154
Group 4.	"Local" Services	191	194
Group 5.	"Regional" Services	346	362
Total in Production		458	441
Total in Services		536	556
Other		9	3

6, was particularly severe in the heavy industries. Consequently the proportions actually working in the various Orders were different from the proportions of the combined body of people, employed and unemployed, associated with the various Orders. (Table 10).

In towns in which the heavy industries are important the difference was even more marked than between the averages for the country as a whole. Unfortunately, the only figures analysed into industrial orders for Urban Districts in England and Wales with fewer than 50,000 inhabitants are for those actually in employment in April, 1931, and consequently these figures have been taken as the standard for all calculations despite their deficiencies. The extent of this deficiency, as shown by the most extreme cases among the larger towns, for which, alone, the necessary information is available, will be considered later and it will be seen that in the majority of cases, the alteration made in the relative importance of the different Orders by including the unemployed is not significant.

Whether, in any particular calculation, the unemployed are included or excluded, twenty-two divisions are too many to allow effective comparison of the variations in proportions between different towns, and the figures for separate Orders are less significant than those obtained by grouping the Orders whose functions are/

are related or similar.

Grouping of Orders.

The groups into which the twenty-two Orders are re-arranged were chosen so that the members of each group show broadly similar relations to geographical and economic conditions. The figures quoted in the following tables are (1) the proportions per 1,000 of employed workers of Great Britain, and(2) the proportions of employed and unemployed persons, associated with each group expressed as thousandths of the total employed and unemployed persons in Great Britain.

Group 1.

The first group, indicated by the first column in the diagram, consists of the persons engaged in direct production of materials from land or sea;

Group 1.

	PRIMARY PRODUCTION.	(1)	(2)
Order II.	Agriculture.	62	59
Order III.	Mining and Quarrying.	58	64
Order I.	Fishing.	3	3
	Total.	123	126

Despite great differences these Orders have some essential features in common, and many that separate them from the rest. They are of necessity much more closely related to the distribution of natural resources than are any of the other orders, and since the resources are scattered over wide areas, the population engaged in exploiting/

exploiting them is also scattered and it is only in exceptional cases that considerable numbers of workers in these industries are found concentrated in the large towns.

Group 2.

The second group, indicated by the second column in the diagrams consists of persons engaged in the major industries;

Group 2.

	MAJOR INDUSTRIES.	(1)	(2)
Order VI.	Metallurgy and Engineering.	105	117
Order VII.	Textiles and Textile Goods.	59	63
	Total.	164	180

The metallurgical and textile industries are grouped together because separately they each employ more workers than any of the other manufacturing industries, and together more than all other manufacturing industries combined. This grouping is also advantageous because most of the important industrial towns owe their rise to the development of one or both of these industries, and the separation of these two from the other manufacturing industries helps to emphasize the few exceptional cases of large industrial towns which have arisen on some other basis. The metallurgical and textile industries differ from each other both in their relations/

relations to supplies of raw material and power and also in their distribution. The simpler forms of engineering are carried on to some extent in all towns, but the proportion of textile workers is negligible in all save the specialized textile towns. Consequently the column which represent the major industries is subdivided only in the diagrams of such towns. The lower part represents the metallurgical industries and the upper part the textile industries in the cases in which they attain a significant proportion, in other cases the whole of the column represents the metallurgical industries.

Group 3.

The other manufacturing industries comprise group 3, indicated by the third column in the diagrams;

Group 3.

	OTHER MANUFACTURING INDUSTRIES.	(1)	(2)
Order IX.	Clothing (not knitted).	44	42
Order X.	Food, Drink and Tobacco.	34	34
Order XII.	Paper and Printing.	25	24
Order XI.	Woodworking.	15	15
Order V.	Chemicals.	11	11
Order IV.	Bricks, Pottery and Glass.	10	11
Order VIII.	Skins and Leather. (not Clothing or Footwear).	4	4
Order XIV.	Other Manufacturing Industries	11	11
		154	152

Although in the larger distributing centres some representatives of each of these groups are found, one or other of the Orders tends as a general rule, to

predominate/

predominate over all the others and there are remarkable concentrations on each of the Orders and even on some of the subsections at particular specialized towns.

Production and Service.

The first three columns of the diagram represent the proportion of the working population engaged in various kinds of production, and the separation into Primary Production, Major Manufacturing Industries and Other Manufacturing Industries is comparatively simple. On the other hand the fourth and fifth columns represent the proportion engaged in various kinds of service. The distinction between physical production of goods and such services as are rendered by people engaged in Administration or Transport is quite clear, but there are other orders in which the distinction is based not on more physical or technical grounds but on the relation of the industry to the town in which it is carried on; whether the industry produces for sale mainly outside the town, or whether it exists merely to render a service to the inhabitants, and is unlikely to expand beyond the needs of the town. Consequently although the production of gas from coal is technically a manufacturing industry it is grouped with the supply of water as a service. Similarly in the case of Building and Contracting which is usually carried on merely in response to local demands.

The/

The essential test is whether the growth of towns depends on the industry, or that of the industry on the towns; or from another point of view, whether it is possible that a town could grow up and continue to exist with the particular industry as the main basis of its economy.

The classification of Order X, Manufacture of Food, Drink and Tobacco, presents another illustration. It might be classed as a "Local Service", if the bulk of the production were sold in the town in which it was manufactured, or grouped with the other manufacturing industries if this were not the case, or an attempt might be made to estimate the appropriate proportions of those employed in this Order to be allocated to each group.

The manufacture of beverages and tobacco is carried on in centralized factories which dispose of their products over wide, in many cases nation-wide, areas, and in this respect they are obviously comparable to the other manufacturing industries. The same is true of the manufacture of most foodstuffs, with the partial exception of the baking industry, but even this is to a considerable extent centralized. It seems best to allocate the whole Order to "Other Manufacturing Industries" especially as branches of this Industry predominate over all other manufactures, in several towns.

Service.

The/

The services are divided into two groups called "Local" Services (Group 4) and "Regional" Services (Group 5), but the distinctions between them is not simple, as it is only one of degree.

Group 4.

	"LOCAL" SERVICES.	(1)	(2)
Order XXI.	Personal Service.	132	126
Order XIII.	Building and Contracting.	50	53
Order XV.	Gas, Water and Electricity.	12	12
	Total.	194	191

Group 5.

	"REGIONAL" SERVICES.	(1)	(2)
Order XVII.	Commerce and Finance.	168	158
Order XVIII.	Public Administration and Defence.	81	77
Order XVI.	Transport and Communications.	70	69
Order XIX.	Professions.	34	32
Order XX.	Entertainments and Sport.	9	9
	Total.	362	345

Both groups provide services for the population of the town in which they are carried on, and to some extent also for outside areas. To the extent that they are confined to providing services for the population of the town in which they are situated they are merely amenities and not factors in the growth and prosperity of the town. They reflect, but do not fundamentally influence, its growth and prosperity. On the other hand to the extent that they meet demands from outside, they do result in a

gain/

gain of income for the town as a whole and any increase in the range of these services will result in an increased income and increased employment in the town and will influence its growth and prosperity.

It is rare for the gas supply or the water supply to be more than a local service, the supply of electricity, on the other hand, is in some cases, distributed regionally from the producing centres. In so far as Order XXI. consists of private domestic servants which it does to the extent of over 60% (1,500,325 out of a total of 2,444,801 employed in the Order) it is local in character but the Order also includes Hotels, which are of regional significance. Building and Contracting is an Order which completely fills the condition that it reflects but does not initiate or support the growth and prosperity of the town in which it is carried on.

Group 6 can be more correctly described as consisting of services which cater for regional needs as well as local ones. They are services in which there are considerable advantages in centralisation. In so far as the group serves local needs its representatives are to be found in every town, but the larger towns provide additional specialized services for wide regions, through "Head offices", wholesale firms, central markets and exchanges, specialized commercial, financial and professional services; by acting as national and regional administrative/

administrative centres and some, more specialised, as national defence centres; by maintaining regional transport services as well as the municipal services; through centres of higher education and in highly organized entertainments.

On this basis 45.8% of the workers in Great Britain are associated with productive industries and 53.6% with the various services, whilst in April 1931 the proportions actually employed in the two groups were 44.1 and 55.6% respectively.

The proportions of these groups in Great Britain are shown in the following diagrams. (Figs. 4, 5, and 6). The first, which is drawn on ~~twice~~ five times the usual scale, shows the sub-divisions in each column, so that the relative importance of the Orders in each group can be seen. The second diagram is in the smaller and simplified form used for the individual towns. In Fig. 5 the total of employed and unemployed is taken as 1,000. It will be seen that, although the unemployed amounted to 13.5% of the employed, and the unemployment was much more severe in the heavy industries, the differences from the previous diagram are comparatively slight. The proportions in Primary ~~Industry~~ Production and Miscellaneous Manufacturing Industries are scarcely altered, and the ~~chief~~

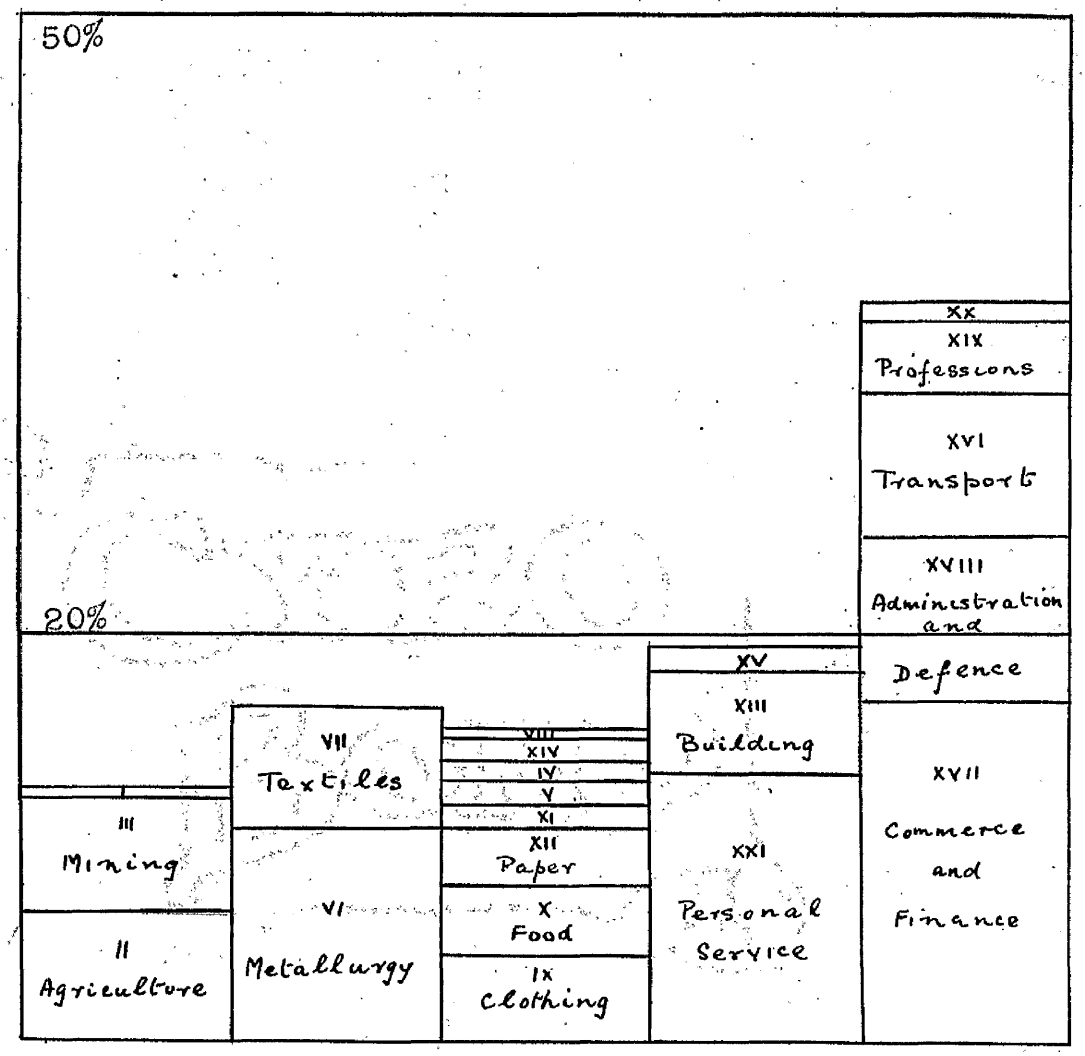


Fig.4. Proportions of employed workers engaged in each of the twenty-one Industrial Orders in Great Britain, arranged in five groups.

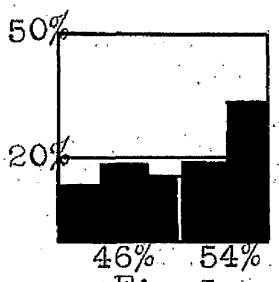


Fig.5.
Great Britain
Employed & Unemployed

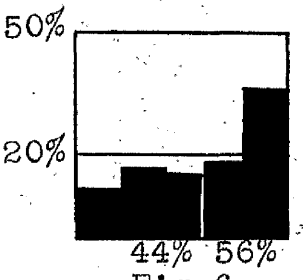


Fig.6.
Great Britain
Employed

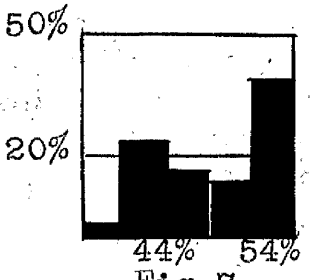


Fig.7.
Scotland
Large Burghs

chief results of the prevalent unemployment are seen in the slight increase in the proportion in "Local" Services, and more markedly in the decrease in the proportion of Major Industries and the still larger increase in the proportion in "Regional" Services, but even these changes have not altered the characteristic form of the diagram.

Although in individual towns the proportions of unemployed are still higher, it remains true that even in the most extreme cases, although, in consequence of unemployment, there has been a considerable decrease in the relative importance of the major industries and a consequent relative increase in the proportions of the other groups, especially in "Regional" Services, the essential form of the diagram is unchanged, and consequently, the consideration of the various types of towns can most conveniently be based on the diagrams derived from the proportions of workers employed, since these are the only ones available for all urban districts.

It will be found that the diagrams for the individual towns do not normally resemble the average for the country, but tend to diverge from it towards more specialised types. Since the activities of towns differ so markedly from those of the country it would be expected that the diagram representing the average for the towns as a whole would differ significantly from the average for the country.

This may be conveniently illustrated by a composite diagram of the "Large Burghs" of Scotland. (Fig. 7)

the diagram is not quite comparable to that for Great Britain because the proportions are calculated on the combined totals of employed and unemployed; also the "Large Burghs" of Scotland are not fully representative of the towns of Britain. Even these defects, however, are not sufficient to destroy the significance of the great reduction in the proportion engaged in primary production and the increase in the proportion engaged in industries, especially in the major industries. The decrease in the proportion engaged in "Local" services and the increase in the proportion engaged in "Regional" services are of more doubtful significance. More important even than this are the differences of function among the towns themselves, which also tend to diverge from, rather than to approach, this average.

Divergence of Types.

There were in England and Wales in 1931 1,148 urban administrative units of which 103 were included in Greater London. Counting Greater London as one unit the total was 1,046 of which 90 had over 50,000 inhabitants 28 between 40,000 and 50,000, 46 between 30,000 and 40,000, 33 between 25,000 and 30,000, 49 between 20,000 and 25,000, 83 between 15,000 and 20,000, 141 between 10,000 and 15,000, 228 between 5,000 and 10,000 and 358 urban units fewer than 5,000 inhabitants.

This study has been restricted primarily to the urban units with over 5,000 inhabitants, of which there were 688. Of this total, 334 administrative units had

more/pg

were 688. Of this total, 354 administrative units had more people engaged in Production than in Services, and the other half had more people engaged in Services than in Production.

In the country as a whole more people were engaged in providing Services than in the productive Orders; the average proportion was 56% engaged in Services and 44% in Production; 372 towns had more than the average proportion engaged in Production and 316 less than the average.

The following table and Fig ?. show the number of towns in which the proportion of workers engaged in "Production" and Services" respectively lies between specified limits at intervals of 5%.

Production predominant.

50-55%	55-60%	60-65%	65-70%	70-75%	75-80%	80-85%	85-90%	90-95%
43	53	51	69	73	45	10	0	0

Services Predominant

50-55%	55-60%	60-65%	65-70%	70-75%	75-80%	80-85%	85-90%	90-95%
28	40	33	45	40	66	50	37	5

It will be seen at once that there is no tendency for the individual towns to have proportions approaching the average for the country but that there is an obvious divergence from it towards two major contrasted types. Of those towns that have specialised on production the most numerous group have between 70% and 75% of their workers engaged in production and between 20% and 25% engaged in providing services. The most extreme divergence from the average in this direction is

at Abram in Lancashire (6,660 inhabitants) where 81.8% of the workers are engaged in the productive Orders. On the other hand there is an equally distinct, but smaller, group of towns specialised even more markedly on the provision of services. The largest group of these have between 75% and 80% of their workers engaged in providing services and only 20% to 25% employed in the productive Orders. The most extreme divergence in this direction is at Farnborough (16,356) 94.5% of the workers are engaged in the provision of services and only 4.8% in the productive Orders.

The fact that the percentages of the predominant group of workers are higher in the case of Services than in the case of Production, both in the extreme cases and in the largest group of each type is a reflection of the fact that it is quite possible for a "Service" town to exist and flourish with scarcely any form of production being carried on but that even the most specialised mining or industrial settlement must provide a certain minimum of services for its inhabitants.

The tendency for divergence towards one or other of the main types is shown by the fact that the smallest group of towns, apart from the extreme groups on either side, is the one, almost in the middle, in which services engaged between 50% and 55% of the workers. The majority of towns fall fairly clearly into one or other of the two main types. Those with over 55% of the workers engaged

Fig.8. Number of Urban Districts with the specified percentages of workers employed in Production and Services respectively.

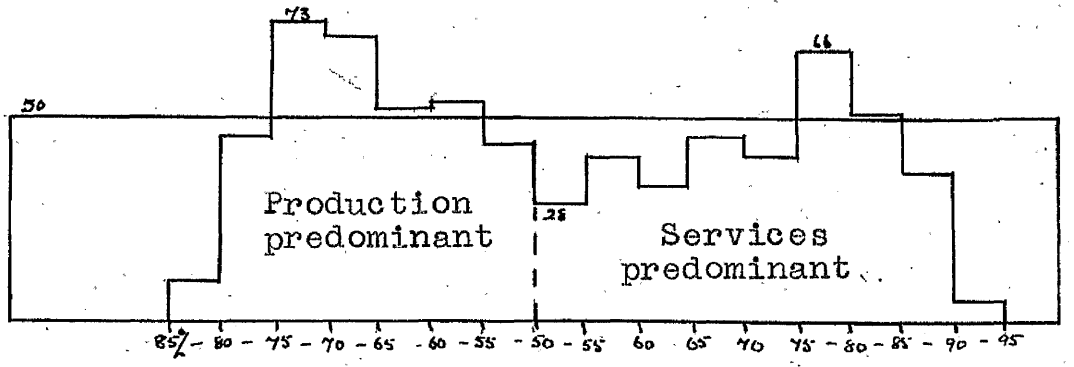
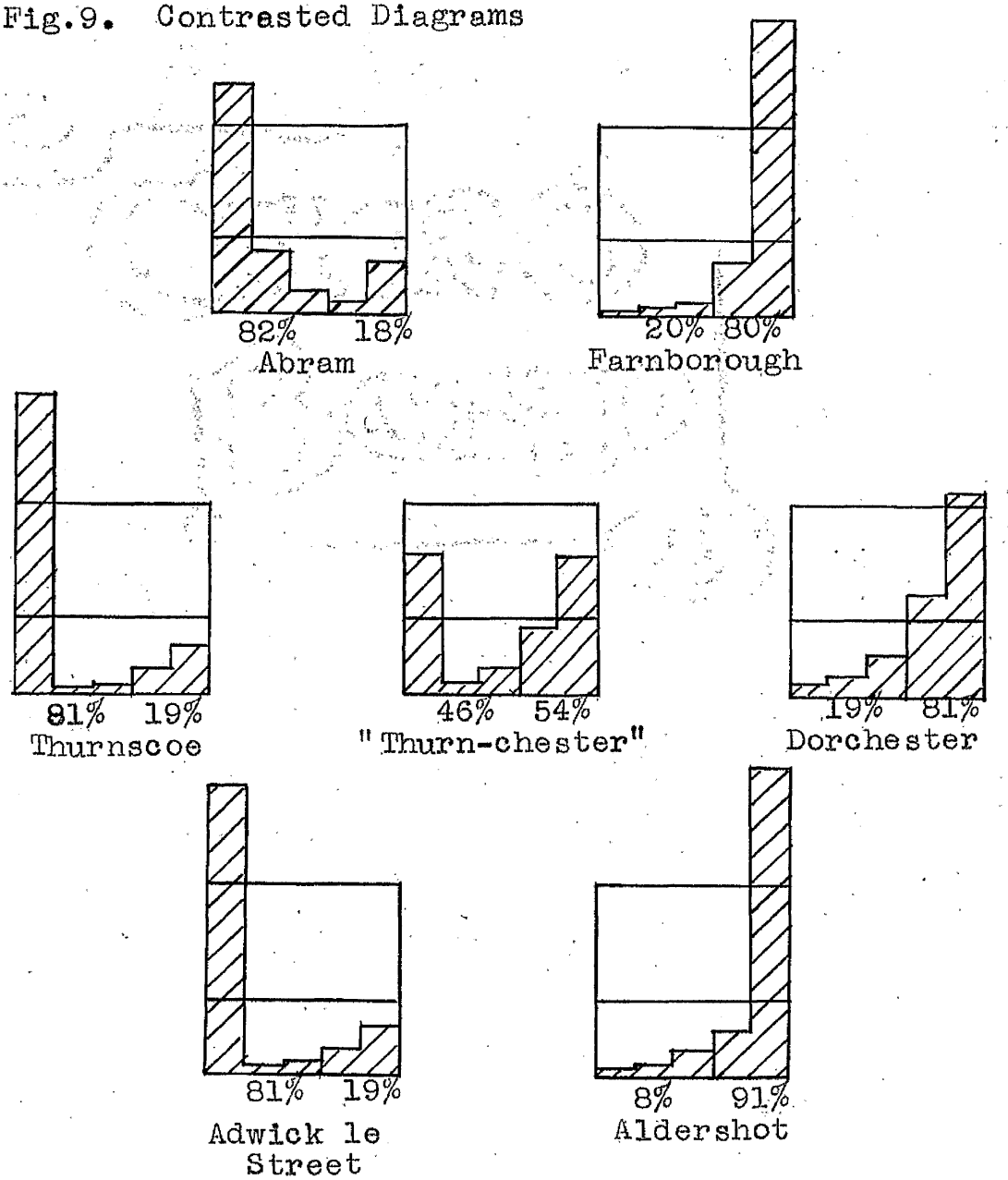


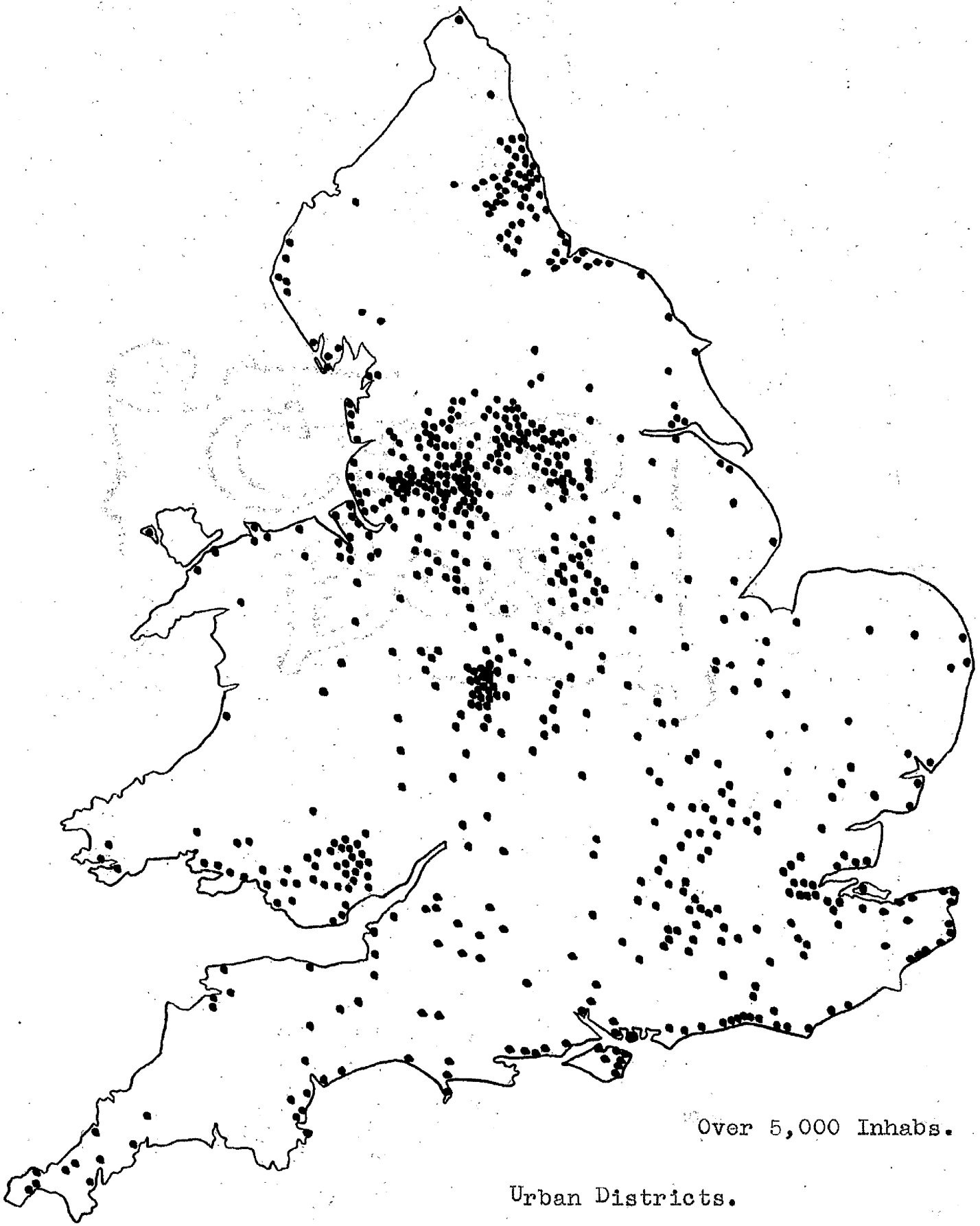
Fig.9. Contrasted Diagrams



in the productive Orders fall clearly into the "Productive Group" (301 towns) and those with over 65% engaged in services into the "Services Group" (243 towns).

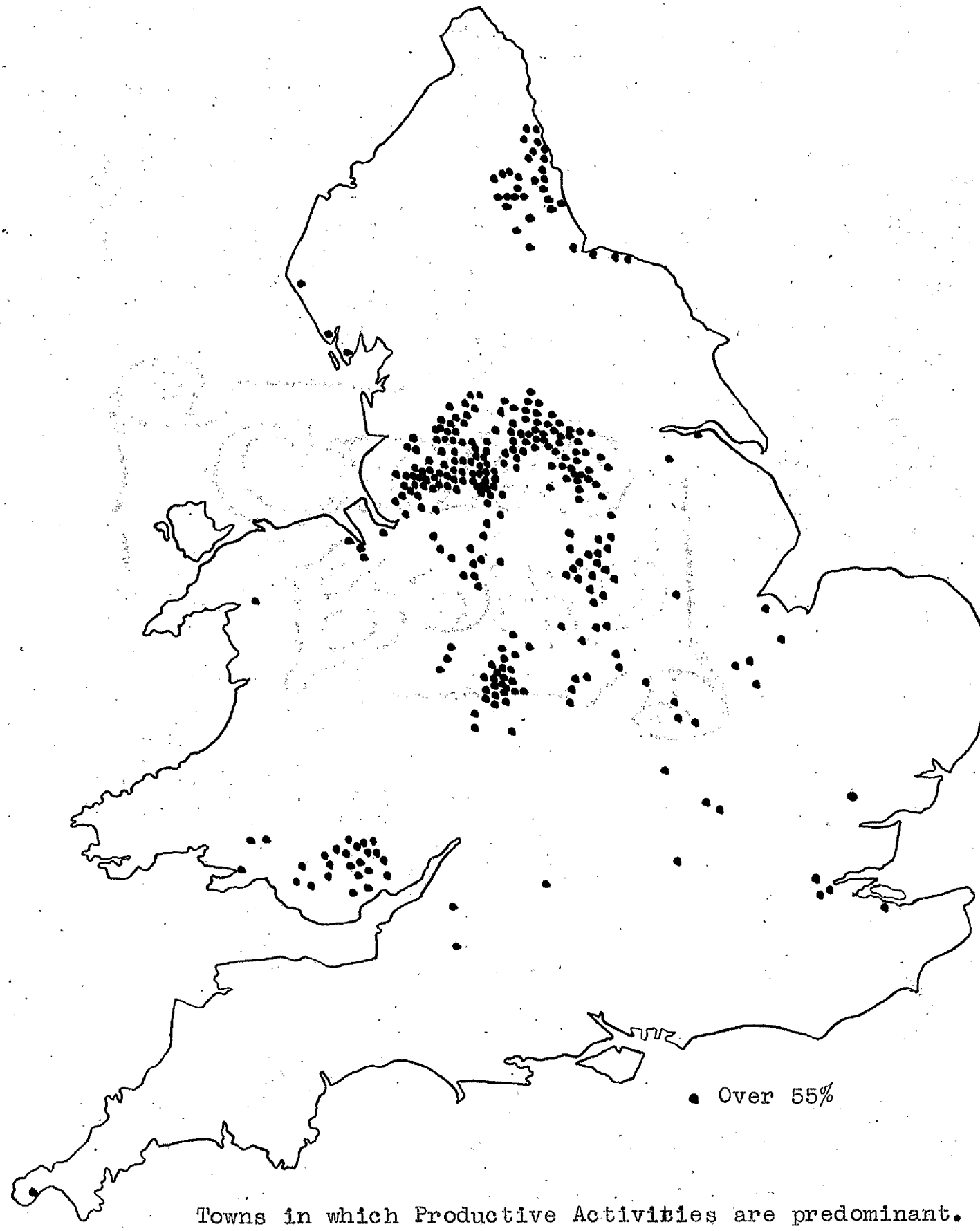
The dividing line of 45% production and 55% services is confirmed by the figures for the synthetic town of "Thurn-chester", compounded from Thurnscoe, which is a mining town without any regional function, and Dorchester which is a regional centre without large scale industry, equal in size to Thurnscoe. The diagrams for the two towns and the "synthetic unit" are shown and the proportions in the latter case are 46% in production and 54% in services.

The fact that similar divergences are to be found in all size groups, but that they are more marked among the smaller towns, may be illustrated by the following examples in addition to the two extremes just quoted, both of which are towns of less than 20,000 inhabitants. In the group of towns with 20,000-50,000 inhabitants Adwick le Street (20,257) has 81% of its working population employed in production and only 19% in the provision of services and at Aldershot (34,280) 91% are engaged in the provision of services and only 8% in production. Even among the large towns the contrasts are nearly as striking; at Eastbourne (57,435) only 12.5% are engaged in production and 87% in services, whilst in Rhondda U.D. (141,346) and at Stoke on Trent (276,639) the proportions are 69% engaged/



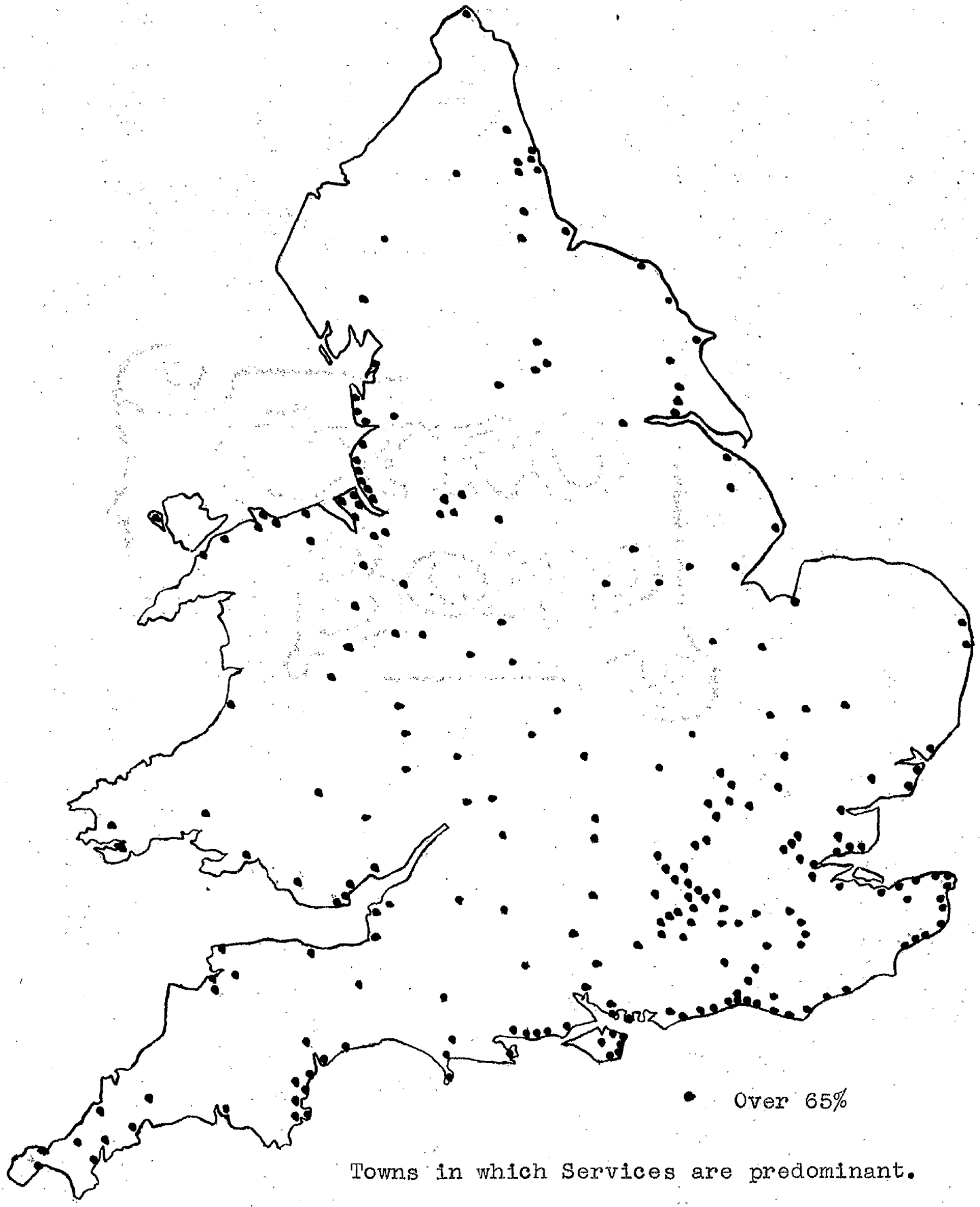
Urban Districts.

Fig.10.



Towns in which Productive Activities are predominant.

Fig.11.



Towns in which Services are predominant.

Fig. 12.

engaged in production and only 31% in the provision of services.

It will be seen that the diagrams show other difference than the mere balance between the proportions employed in production and in services.

The reasons for these differences and also for the reflection of the existence of specialized types of towns in the diagrams will be seen in a consideration of the relations of the different Orders to geographical and especially urban conditions, and also the effects of the relative importance of the different Orders on the appearance of individual diagrams.

THE EFFECT UPON THE DIAGRAMS OF THE EXCLUSION OF WORKERS UNEMPLOYED AT THE TIME OF THE CENSUS.

As has been shown for Great Britain as a whole the inclusion or exclusion of the workers unemployed at the time of the census makes very little difference to the form of the diagram. Since the only figures available for all towns exclude the unemployed and give only the numbers employed in the individual groups and Orders in April 1931 the diagrams for the classification of towns into types must be based on these figures and it is necessary to investigate the nature and extent of the errors introduced. Fortunately diagrams based on these figures do not differ to a serious extent from those based on percentages of the employed and unemployed combined, except in a few extreme cases.

The relatively small changes produced by excluding the unemployed from the calculations will be appreciated after an examination of the diagrams of those towns with the largest percentages of unemployment among those for which the unemployed workers are classified into the same Orders as the employed workers; that is among towns with more than 50,000 inhabitants.

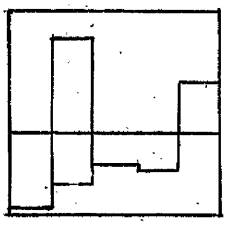
Even in Blackburn where the unemployed were nearly half as numerous as the employed, and where among those associated with the chief industry there were more unemployed/

unemployed than employed, the difference between the two diagrams is not excessive. The exclusion of the unemployed leads to a substantial reduction in the relative importance of the "Major Industries," (in this case almost entirely textiles), and slight increases in the relative importance of the other industries and in the services, more marked in the case of the "Regional" than the "Local" services.

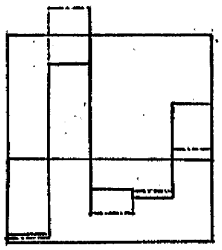
The diagram for Methyr Tydfil, where the proportion of unemployed to employed was 47.8%, shows somewhat greater difference because the virtual elimination of the smelting branch of the metallurgical industry has resulted in exceptionally severe unemployment in this group. Similarly in South Shields, exceptionally heavy unemployment in the metallurgical industry has resulted in a reversal of the relative importance of Primary Production and the Major Industries. At Sunderland too the reduction in the relative importance of the "Major Industries" group has been exceptionally severe.

It must be remembered that these four examples were selected because they were the most extreme. In towns in which the proportion of unemployed is less than a third of the number working, the differences between the proportions in the two cases, are so slight as to be neglible, as is shown by Gateshead and Oldham.

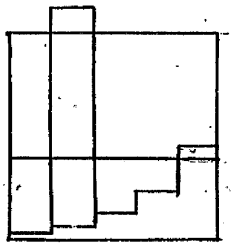
Among the smaller towns with 5,000 to 50,000 inhabitants there are 35 in which the unemployed men are more than a third/



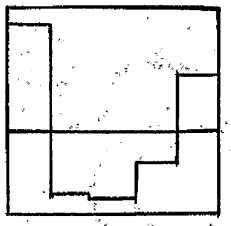
57% 43%
Employed only



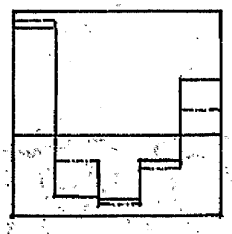
Blackburn



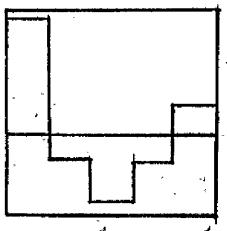
55% 35%
Employed & Unemployed



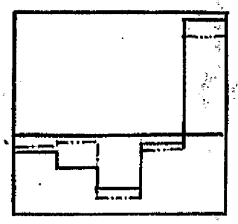
56% 44%
Employed only



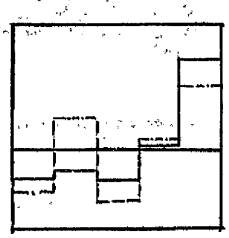
Merthyr Tydfil



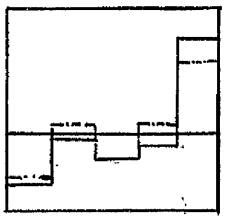
62% 38%
Employed & Unemployed



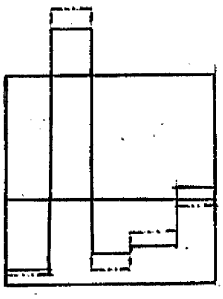
South Shields



Sunderland



Gateshead



Oldham

Employed workers only
Employed and unemployed workers

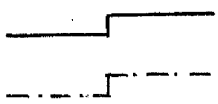


Fig.13. Showing the effect on the diagrams of excluding unemployed workers.

third as numerous as those in employment and the proportion of all unemployed is more than 30% of the number working. Since it is impossible to find from the census which Orders these unemployed were associated with, all deductions must be made on the basis of the people still employed and in these few cases there is the possibility of a large margin of error. In general it may be assumed that the bulk of the unemployed were associated with the dominant industry, especially in those cases, the majority, in which there was only one important activity in the town in 1931. It must however, always be borne in mind that exceptionally high unemployment may be due to the virtual closing down of one branch of activity, which would consequently not be represented in the diagram of those employed in 1931. In cases where two productive activities were still carried on in the town it is by no means certain that the numbers employed in them in 1931 in any way represent their former relative importance.

Jarrow	96%	Brynmawr	45%	Guisborough	36%
Great Harwood	85%	Stalybridge	43%	Llantarnam	35%
Bedwas and Machen	81%	Pontypridd	42%	Felling	34%
Hebburn	73%	Nantyglo and Blaina	42%	Eston	33%
Darwen	65%	Connah's Quay	41%	Bishop Auckland	32%
Hartlepool	62%	Thornaby on Tees	40%	Brandon and Byshottles	31%
Maesteg	54%	Burry Port	39%	Shildon	31%
Cwmamman	53%	Risca	39%	Gainsborough	31%
Wallsend	51%	Ebbw Vale	38%	Pembroke	30%
Spennymoor	51%	Caerphilly	37%	Maryport	30%
Cleator Moor	50%	Audley	37%	Camborne	30%
Mossley	48%			Buckley	30%

FUNCTIONAL TOWN TYPES.

The diagrammatic representation of the proportions of workers employed in each of the five main groups enables us to distinguish certain types of diagram. Larger or smaller groups of diagrams show similar forms and tend to approximate to the form that would represent the activitiesof certain functional types of towns that have long been recognised by geographers as well as the general public, although they have never been accurately defined. almost all the types refelcted by the diagrams have been recognised, but some of the types which are commonly referred to in geographical literature and general speech do not exist in quite the form in which they are commonly imagined, nor do many towns show the simplicity and purity of function that is commonly attributed to them.

The following section, based on the proportions calcutlated for the 688 urban units of England and Wales that had over 5,000 inhabitants in 1931, presents and classifies the towns which correspond most closely to the theoretical types. The problem of establishing the characteristics of the pure theoretical types is deferred until a later section.

One fundamental contrast that has already been emphasized is the contrast between those towns which have specialised on productive activities and those which exist mainly to provide services for a dependent area. The former will be dealt with first.

PRODUCTIVE TYPES.

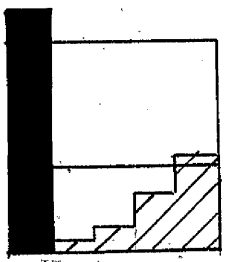
A striking feature of the towns in which productive activities predominate is the extent to which they are specialised on particular branches of production. It is comparatively rare to find a town, dependent primarily on production, in which two different branches of production are of considerable importance and there is no example of such a town with a wide and comprehensive range of productive activities. The following are the chief types of productive specialisation.

I. Specialised on Primary Production.

1. Agricultural Towns.

Although the terms agriculture and town may seem incongruous, by changing the name to agricultural settlement we have a description of one of the oldest types of settlement and the most common and widely represented of all types at the present day, although most of the individual settlements are too small to be called towns.

Among the Urban Districts of this country Holbeach (6,000) is most dependent on agriculture, in which Order 58% of its workers were employed.



Holbeach
Fig.14.

The table on the following page shows the number of

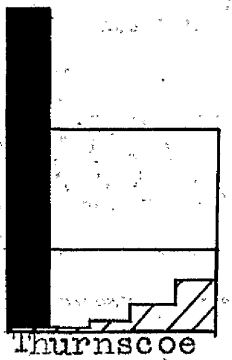
Urban Districts with the specified proportion of their workers employed in agriculture.

50% - 60%	3
40% - 50%	-
30% - 40%	2
20% - 30%	4
10% - 20%	4
Over 10%	15

It will be seen that it is very rare for agriculture to be of much importance in this country in towns with over 5,000 inhabitants.

2. Mining (and Quarrying) Towns

The most specialised mining town is Thurnscoe (10,500) where 78.8% of the workers were employed in mining.



Thurnscoe
Fig.15

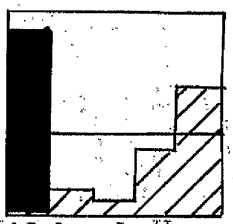
The following table shows the number of Urban Districts with the specified proportion of their workers engaged in mining or quarrying.

70% - 80%	12
60% - 70%	33
50% - 60%	21
Over 50%	66
40% - 50%	22
30% - 40%	30
20% - 30%	26
10% - 20%	32
Over 10%	178

The foregoing table shows that there are many highly specialised mining towns and that mining or quarrying has played a significant part in the growth of a quarter of the towns in England and Wales.

3) Fishing Ports.

The most specialised fishing port is Milford Haven (10,000) where 44.8% of the workers were employed in fishing.



Milford Haven
Fig.16

The following table shows the number of towns with the specified proportion of their workers employed in fishing.

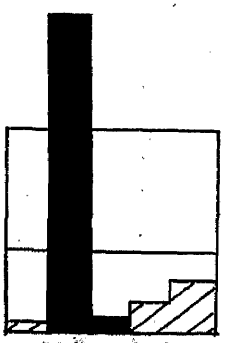
40%-- 50%	1
30% - 40%	2
20%- 30%	-
10% - 20%	5
Over 10%	8

The number of towns in which fishing is even moderately significant in supporting the population is smaller than the number correspondingly dependent on agriculture.

II MANUFACTURING TOWNS.

The town with the highest proportion of its workers employed in manufacturing industries is Marsden (6,000), where 79.9% of the workers were so employed.

Figure. 17



Marsden

The following table shows the number of towns with the specified proportion of their workers employed in manufacturing.

70 - 80%	29
60- 70%	70
50 - 60%	61
over 50%	160
40 - 50%	78
30 - 40%	77
20 - 30%	109
10 - 20%	174
Over 10%	598

Thus manufacturing employs a majority of the workers in nearly a quarter of the towns in the country.

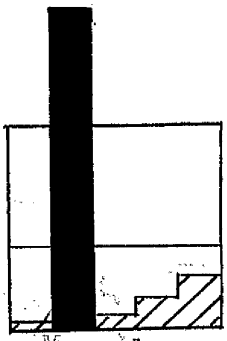
Like the towns concerned with forms of primary production most of the manufacturing towns are of specialised types. It is convenient to consider those concerned with the two major industries in a section separate from that which /

which deals with the towns concerned with the minor manufacturing industries.

Major Industries.

Marsden is also the town with the largest proportion of its workers employed in the major industries ; 76.1% of the workers were employed in this group.

Figure 18



The following table shows the number of towns with the specified proportions of the workers employed in the major industries.

70 - 80%	7
60 - 70%	24
50 - 60%	50
Over 50%	81
40 - 50%	45
30 - 40%	56
20- 30%	64
10 - 20%	92
Over 10%	388

Thus the major industries employed a majority of the workers in almost an eighth, and played a significant part in supporting the population of over half the towns in the country.

The/

The extent to which specialisation has been carried in the different Orders and some of the more important sub-Orders is shown in the following table,

	Order	(1)	(2)	(3)	Town
VII	Textiles	76.1	5.9	12.9	Marsden
	Woollen industry	74.8			Marsden
	Cotton industry	72.2			Barnoldswick
	Artificial Silk	56.0			Flint
	Knitwear	52.0			Hinckley
	Carpets	46.0			Kidderminster
	Silk	34.6%			Leek
	Finishing	29.6			Turton
	Rope	25.4			Bridport
	Lace	16.3			Tiverton
VI	Metallurgy	75.1	10.5	7.2	Darlaston
	Cables	53.8			Prescot
	Hardware	51.2			Darlaston
	Vehicles	47.5			Wolverton
	Smelting etc.	44.2			Scunthorpe & Frodingham
	Shipbuilding	40.5			Barrow in Furness
	Tinplate	35.3			Llwchwr
	Engineering	33.2			Gainsborough

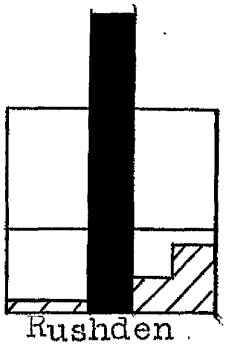
(1) Highest percentage of workers employed in the Order or sub-Order in any town in England and Wales.
(2) Percentage of the workers of Great Britain employed in the Order.
(3) Factor showing the number of times by which the proportion employed in the Order in the most specialised town exceeds the national average.

Minor Manufacturing Industries.

The other manufacturing industries are classified into eight Orders, in some of which quite unrelated and dissimilar industries are grouped together; for example brick and glass making are both included in Order IV as well as pottery; Order V includes the crushing of oilseeds andthe refining of vegetable oils in addition to the heavy chemical industry.

The town with the largest proportion of its workers

engaged in the minor manufacturing industries is Rushden (14,000) where 72.8% of the workers are employed in manufacturing industries included in this group.



Rushden
Fig.19.

The following table shows the number of towns with the specified proportions of their workers employed in the minor manufacturing industries

70% - 80%	1
60% - 70%	-
50% - 60%	2
Over 50%	3
40% - 50%	15
30% - 40%	23
20% - 30%	59
10% - 20%	238
Over 10%	338

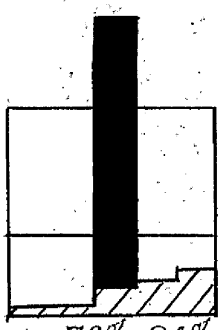
It will be seen that it is quite exceptional for this group of manufactures to employ a high proportion of the workers in a town. Although manufactures of this group play a significant part in supporting the population of over half the towns in the country, most of them are in the lowest group.

There are many striking examples of specialisation on particular Orders and sub-Orders of the less important manufacturing industries. Bootmaking is, however, the only one in association with which there is a town in which the proportion of the workers employed in the industry is at all comparable with the proportions employed in the major industries in the more specialised manufacturing towns.

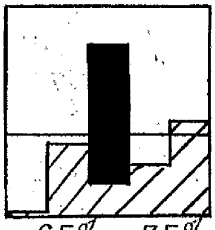
The extent to which specialisation has been carried in the individual Orders and some of the more important sub-Orders is shown in the following table.

	Order.	(1)	(2)	(3)	Town
IX	Clothing	66.5	4.4	15.1	Rushden
	Shoes	66.5			Rushden
	Hats	34.8			Luton
V	Chemicals	47.3	1.1	43.0	Billingham
	Heavy Chemicals	47.3			Billingham
	Soap	36.9			Bebington and Bromborough
XI	Woodwork	47.0	1.5	31.2	Chepping Wycombe
	Furniture	47.0			Chepping Wycombe
IV	Pottery	42.5	1.0	42.5	Stoke on Trent
	Bricks	42.2			Knottingley
	Glass	28.8			St. Helens
XII	Papermaking etc.	35.2	2.5	14.0	Hemel Hempstead
X	Food, Drink etc.	27.0	3.4	7.9	Burton upon Trent
	Brewing	27.0			Burton upon Trent
	Food	18.5			York
XIV	Other Industry	19.3	1.1	17.5	Lancaster
	Linoleum	19.3			Lancaster
VIII	Leather	10.7	0.4	26.9	Runcorn

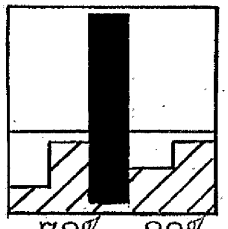
Fig.20. Towns with specialised Minor Manufacturing Industries.



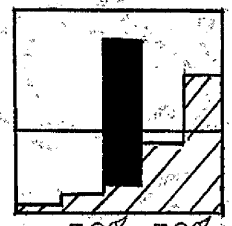
Rushden



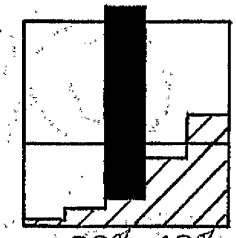
Luton



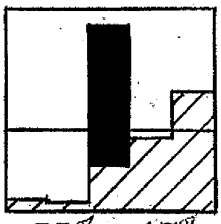
Billingham



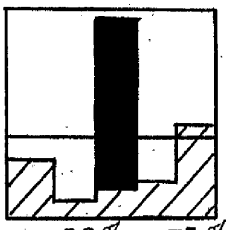
Bebington & Bromborough



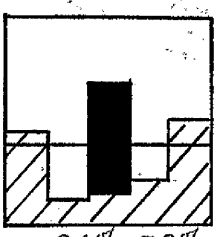
Chepping Wycombe



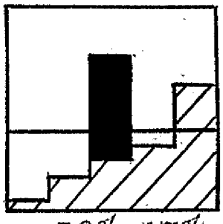
Hemel Hempstead



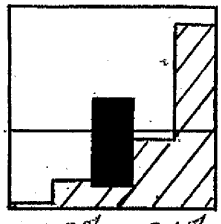
Stoke on Trent



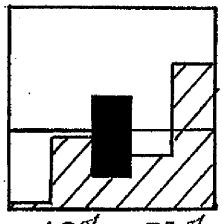
St. Helems



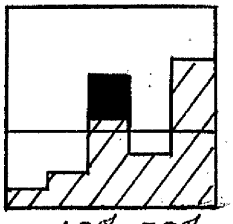
Burton on Trent



York



Lancaster



Runcorn

It will be seen from the table and the diagrams that as we descend the list the most specialised town is farther and farther from showing singleness of function.

Among the manufacturing towns the following types can be recognised directly from the diagrams:

(1) Metallurgical and Engineering Towns.

(2) Textile manufacturing towns.

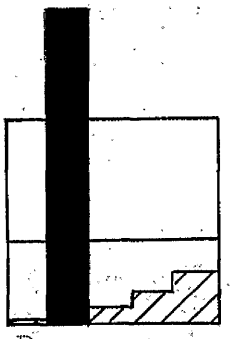
(3) Towns dependent on minor manufacturing industries.

It is not difficult to obtain from the diagram an idea of the extent to which any town had specialised on any one of these activities, but it is necessary to refer to the census figures to find which branches of these activities are carried on, and in the case of towns with fewer than 50,000 inhabitants it is sometimes impossible to penetrate through the census classification and find what particular branch or branches of manufacturing industry are carried on.

It would be possible to split manufacturing towns into an indefinite number of sub-types corresponding to the various manufacturing processes, but a detailed sub-division tends to decrease rather than increase the geographical significance of the classification. These first two types of manufacturing town in the above list are considered on more detail in the following sections.

1) Metallurgical and Engineering Towns.

This group includes many important sub-types, of which the more outstanding are listed on the previous page. The most specialised of the metallurgical towns is Darlaston (20,000) where 75.1% of the workers were employed in this Order.



Darlaston
Fig.21.

The following table shows the number of towns with the specified proportion of their workers employed in metallurgy and engineering.

70% - 80%	1
60% - 70%	1
50% - 60%	13
Over 50%	15
40% -50%	15
30% - 40%	28
20% - 30%	42
10% - 20%	90
Over 10%	190

Thus over a quarter of the towns in the country have more than 10% of their workers employed in this Order, but almost half of these were in the lowest group (10%-20% employed in (the Order). There were fewer specialised metallurgical towns than mining towns in all groups with more than 30%

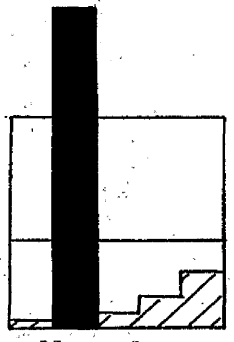
of the workers employed in the appropriate Order, (Fig.) There were only 15 towns with over 50% of their workers employed in metallurgy compared with 66 mining towns with corresponding proportions. Only two exceptional towns had more than 60% of their workers employed in metallurgy whereas the corresponding number of mining towns was 46.

The different proportions of unemployment in the two Orders(27% in metallurgy and 23% in mining) are quite inadequate to account for this contrast which reflects fundamental differences between the geographical characteristics and relations of the two Orders.

2) Textile Manufacturing Towns.

In this group also there are many well-known sub-types, some of which are listed above.

The most specialised of all the textile manufacturing towns is Marsden (6,000) where 76.1% of the workers were employed in this Order.



Marsden
Fig.22.

The following table shows the number of towns with the specified percentages of their workers employed in textile manufacturing.

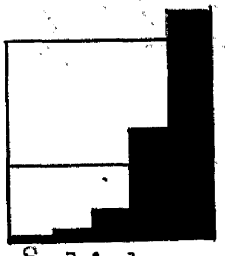
70% - 80%	3
60% - 70%	13
50% - 60%	19
Over 50%	35
40% - 50%	29
30% - 40%	31
20% - 30%	32
10% - 20%	33
Over 10%	160

Nearly a quarter of the towns of England and Wales have more than 10% of their workers employed in textile manufacturing but the number is slightly less than in the cases of mining and metallurgy. There is not an exceptionally large number of towns in the group with 10% to 20% of the workers employed in the Order and in respect of the number of highly specialised towns this Order is intermediate between the other two. Thirty-five towns have over 50% of their workers employed in the textile manufacturing industries.

III REGIONAL CENTRES.

Unlike the various types of productive towns, Regional Centres cannot be immediately recognised, merely because the appropriate column shows a high proportion of the workers employed.

The essential characteristic of a normal regional centre is that it provides a balanced range of services; commercial and financial, transport, administrative and professional. Such normal regional centres, when their character has not been modified by any secondary characteristics, have between 50% and 60% of their workers employed in the regional services group and the form of the diagram approximates to that shown by Salisbury (26,000).



Salisbury
Fig.23.

On the other hand the character of many of the older regional centres has been modified by industrial developments and so many of the industrial towns have some regional function, that the most important question is not the number of pure regional centres that remain, but the

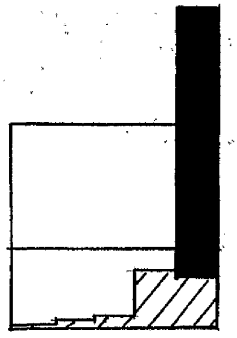
actual numbers of people in each town who depend on regional functions and productive activities respectively. This problem, which is not always easy to solve is discussed in a later section.

IV. Types Providing Specialised Services.

If the proportion of workers employed in the regional services group exceeds 60% it is an indication that there is a considerable degree of specialisation on one particular service and that the town approximates to one or other of the following types.

(1) Defence Centres

The most specialised of the defence centres is Farnborough (16,000) where 65% of the workers are engaged in the defence services.



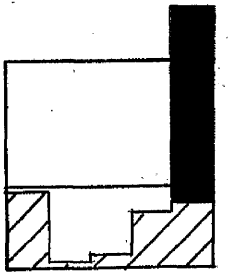
Farnborough
Fig.24

The following table shows the number of towns with the specified proportion of the workers employed in the defence services.

60% --	70%	2
50% -	60%	1
Over	50%	3
40% -	50%	2
30% -	40%	4
20% -	30%	3
10% -	20%	12
Over	10%	24

The table shows that although there are three examples of highly specialised defence centres, the number of towns in which the defence services employ a significant proportion of the workers is small.

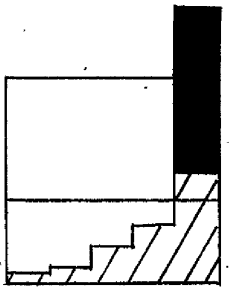
The defence centres are of two types; garrison towns, represented by Farnborough, and naval bases. Portland (12,000) is the most specialised of the naval bases, and had 47.2% of its workers employed in the defence services.



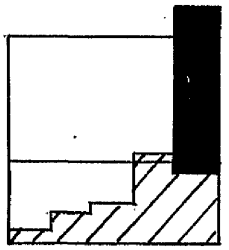
Portland
Fig.25.

(2) Transport Centres.

The most specialised tramsport centres are Goole (20,000) and Tilbury (17,000) in both of which 40.6% of the workers were employed in the transport industries.



Goole
Fig.26



Tilbury
Fig.27.

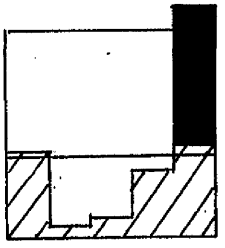
The following table shows the number of towns with the specified proportion of their workers employed in transport.

40% - 50%	2
30% - 40%	6
20% - 30%	5
10% - 20%	87
Over 10%	100

Transport employs a significant proportion of the workersin just over a seventh of the town in England and Wales but there are only 13 towns with more than 20% of their workers employed in this order and none with 50%.

The transport centres are of two main types; specialised ports, represented by Goole and Tilbury, and railway operating centres.

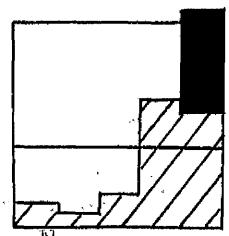
March (11,000) is the most specialised of the railway operating centres with 32.6% of its workers employed in transport.



March
Fig.28.

(3) Amusement Centres.

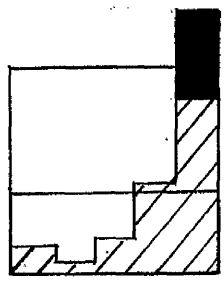
There is a unique example of a town with a high proportion of its workers employed in an amusement industry. Newmarket (10,000) has 23.4% of its workers employed in racing stables. No other town has even 5% of its workers employed in this Order.



Newmarket
Fig.29.

(4) Administrative Centres.

Bodmin (5,500) has the highest proportion of workers employed in administration, 21.1%.



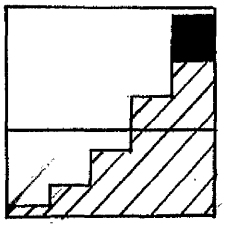
Bodmin
Fig.30

Bodmin is the only town with over 20% of its workers employed in administration, but there are 39 towns with between 10% and 20% of their workers so employed.

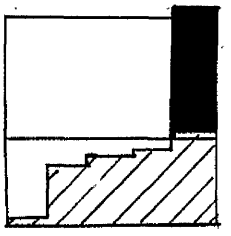
Some descriptions frequently applied to certain towns suggest specialisations that do not exist. They do not describe functional types but merely one well-known activity of the towns to which they are applied.

For example, the terms University town and Cathedral city are often used but the highest proportion of workers employed in education in any town is 10.3% at Cambridge. Such a proportion has very little effect on the diagram and does not constitute a distinct functional type, and there is still less reason to consider Cathedral cities as a functional type.

References to commercial and financial centres are also common and in an absolute sense justifiable, but commercial and financial services are merely the most important activities of regional centres, and it is improbable that nay town will ever exist that specialises solely on commercial and financial activities apaprt from other general regional services. The highest proportion in this Order is 30.3% of the employed workers at West Bridgford, a suburb of Nottingham. This high proportion does not establish it as a special type; it is merely a part of a regional centre, with a slightly higher proportion of its residents engaged in commerce and finance.



Cambridge
Fig.31



West Bridgford
Fig.32.

The term "port", as applied to large towns is a similar case. The largest movement of ships and goods takes place from the docks and quays of London and Liverpool which are the two chief ports of the Kingdom, but the activities of their ports are only a small part of their general activities as major regional centres. In Goole and Tilbury the port function is dominant; in London and Liverpool it is merely part of a highly complex but integrated series of activities which serve the main function of the towns, their regional function.

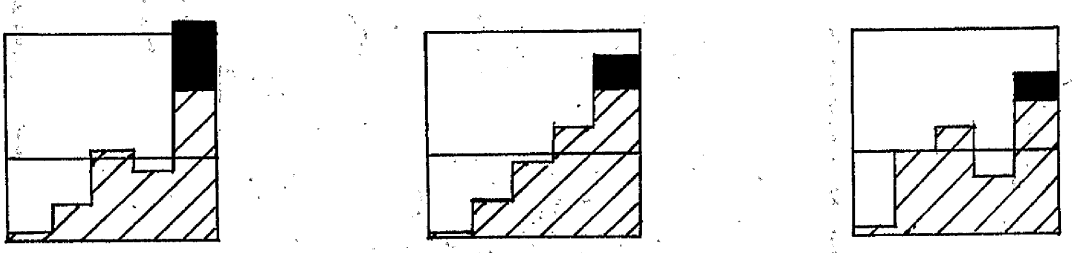


Fig.33.

The point may be further illustrated by the case of Manchester. Since the cutting of the Manchester Ship Canal Manchester has become one of the five busiest ports in the country, but in spite of this valuable addition to its transport facilities, its essential character as a regional centre has not changed, nor has its rate of growth been significantly different from those of other towns of similar size and character.

By the nature of their sites two towns were able to compete on relatively equal terms as regional centres for South Lancashire; Liverpool at a site away from the heart of the region but adjacent to navigable water, and Manchester more conveniently situated in relation to the chief manufacturing towns but without natural facilities for water transport. The two towns do not however perform diffe different functions, and with the elaboration of inland communications from Liverpool, and the creation of the artificial port of Manchester their sites remain of approximately equal value. Under other circumstances, if one site had had decisive advantages there would have been o only one major regional centre in south Lancashire.

V HOLIDAY AND HEALTH RESORTS.

(Residential Towns)

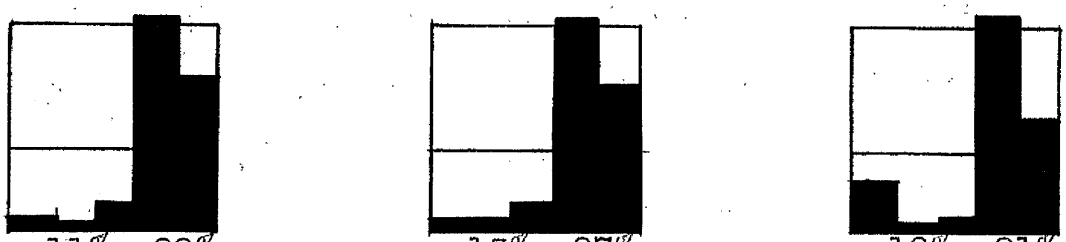
This is a well-known type and one with a very characteristic form of diagram, although it cannot be satisfactorily defined in relation to one particular group of workers. The essential features are a low proportion of workers employed in productive activities and a high proportion engaged in providing services, especially "Local Services". In all cases the proportion employed in services is over 70% and in most well-defined cases employing less than 50% of the total and "Local Services" over 80% with "Regional Services" over 32.5%. The latter group forms the best single diagnostic.

There were in 1931 92 towns whose diagrams fell within the limits of the above definition. The following table shows the number of them with the specified proportions of their workers employed in the "Local Services" group.

50%	- 55%	-	3
45%	- 50%	-	11
40%	- 45%	-	32
35%	- 40%	-	37
32.5	- 35%	-	9
			92

The table shows not merely that such types are fairly common but also that there is a distinct tendency for the proportion of workers employed in "Local Services" to lie between 35% and 45%.

The three towns with over 50% of their workers in the "Local Services" group are Shanklin (5,000), Sidmouth (6,000) and Windlesham (5,000)



11% 89%
Shanklin

13% 87%
Sidmouth

19% 81%
Windlesham

Fig.34.

The latter belongs to a group of towns lying to the south and west of London, that show essentially similar diagrams to the seaside resorts and spas; they are residential centres inhabited by a very similar class of people.

Summary Classification.

The following functional types of towns may be recognised with the aid of the diagrams.

A. PRODUCTIVE TYPES.

I Specialised on Primary Production

1) Agricultural Towns.
2) Mining Towns.
3) Fishing Ports.

II Manufacturing Towns.

Major Manufacturing Industries

1) Textile Manufacturing Towns.
2) Metallurgical and Engineering Towns.
3) Towns concerned with minor manufacturing industries.

B. TYPES IN WHICH SERVICES PREDOMINATE.

III Regional Centres.

IV Types providing specialised Services.

1) Defence centres.
2) Transport centres.
3) Amusement centres.
4) Administrative centres.

V Health and Holiday Resorts. (Residential Towns).

The characteristics and geographical significance of these types will be investigated in later sections. First it is necessary to consider the relations between the number of significant workers and the population in Productive Towns and Regional Centres respectively.

LIMITATIONS ON THE USE OF DIAGRAMS BEYOND A BROAD CLASSIFICATION OF TOWNS INTO FUNCTIONAL TYPES.

Valuable as the diagrams are for the purposes of general classification of towns according to their functions there are difficulties in the way of using them to estimate the relative importance of the parts played by the different activities in the maintenance of the population of a particular town.

There are the difficulties introduced by the varying degree of unemployment in different towns. The apparent importance of the dominant industry in a town may be considerably decreased by an exceptional degree of unemployment. Correspondingly the apparent importance of the local and regional services, in which unemployment is considerably below the average (8.6% cf. 13.6% in the latter case) is increased.

There are also difficulties introduced by the varying proportions of women employed in productive industries in different towns. An industry which employs a large number of women may be very important functionally and contribute valuable additional income to many families resident in the town without supporting a corresponding additional number of people in the town - the number of inhabitants will still be related to the amount of employment normally available for men.

The difficulties in the way of using the diagrams to determine the relative importance of Production and Services are/

are insuperable as can be seen by the following considerations.

Balance between Production and Services.

The relations between production and services as factors in town growth are complicated in themselves and still more complicated by the relations of male and female labour, and consequently the proportions of the different groups as indicated in the diagram do not directly illustrate the relative importance of the different groups in the growth and maintenance of any town. Even in the most specialized mining centre, the existence of which is wholely dependeh on the income from the mines, and which not only does not derive income from providing services for surrounding areas but is indebted to a larger centre for some of its services, the proportion of workers employed in providing services is at least 20%. That is to say, not until the proportion employed in providing services is above the average for the country (36.2%) is it likely that the town, is on balance, a regional centre. But, on this basis, some of the largest towns in the country, including Birmingham, appear to be deficient in services, although it is well known that they act as regional centres for a considerable population in the adjacent manufacturing towns.

A possible explanation of such an anomaly lies in the/

the fact that whilst Birmingham provides an excess of services over its own needs for the surrounding area, these services are not quite equivalent to those for which Birmingham depends on London (and other centres). Since all towns derive considerable services from London it would be an improvement to eliminate the workers in London and strike a new average for the rest of the country (33.5%) to find out if the other towns act as local regional centres. The smaller a town, the more dependent it is on the larger ones and the smaller is the proportion of services that is necessary to leave it with a surplus to act as a local subordinate regional centre. Similarly its absolute importance as a regional centre is not indicated by the proportion of workers engaged in services but the number of workers in excess of its own needs who are employed in the town and consequently, are a positive factor in maintaining a population beyond the limit set by the employment capacity of the local productive industries.

For the smaller towns the problem is still further complicated by the fact that the only proportions known are those of employed workers. In this respect the difference between the proportions associated with services if the unemployed are included or excluded is more serious than its effect on the form of the diagram. When there is heavy unemployment among the industrial workers in a town the number of workers employed in providing the services is not reduced proportionately, and consequently services which are only sufficient for/

for the total population of the town may appear excessive in relation to the number of employed workers, as of course does the total population of the town. The problem of judging the relative importance of the two branches in the growth and maintenance of the town population is still further complicated by the varying proportion of women employed in the two branches in different towns. This has already been indicated briefly but the significance will now be analysed in more detail.

THE RELATION BETWEEN THE NUMBER OF WORKERS AND THE NUMBER OF INHABITANTS IN TOWNS.

For the purpose of studying the variations of function from town to town it is obviously necessary to use diagrams which include all workers, both male and female, and also when possible, the unemployed as well as those who were actually in work on April 26th 1931. Such diagrams however do not enable us to estimate directly the proportion of a town's population that is to be attributed to each of its functions.

In the first place the population of any town is not directly related to the number of workers but in the majority of cases to the number of potential male workers, i.e. the total number of men associated with the various industrial orders, unemployed as well as employed.

A direct relation between the number of employed workers resident in a town in April 1931, and the population of the town is not to be expected for the following reasons.

(1) The population is adjusted to the demand for labour at prosperous times, and scarcely alters in times of temporary depression such as 1931, and only readjusts itself slowly to any permanent decrease in the demand for labour. If, in any town, there is an/

an increase of demand, beyond the existing labour supply, the number of workers, and, subsequently, the population, will be rapidly adjusted to the new level, but the recruits will come from many different areas and the consequent reductions in the individual depressed areas will be very slight.

The populations of the different towns will therefore be more closely related to the ~~number~~total of employed and unemployed workers than to the number employed in April 1951.

(2) This relation is modified however, by the proportion of women workers. In towns in which more than the average proportion of the workers are women, the total population will be less than in a town in which the same number of potential employees includes more men.

In towns with a large proportion of women workers, a larger proportion of families have more than one wage earner, but this will tend to decrease rather than to increase the size of the family, since women in employment have a direct incentive to avoid having children.

(3) Consequently the populations of the different towns will not be directly related to any one factor, but will be most closely related to the number of potential male wage earners, which is reflected in the total number of employed and unemployed male workers.

These points are illustrated by the following examples.

The population of Great Britain was 2.39 times as large as the number of people employed in April 1931, 2.12 times as large as the number of workers, employed and out of work on that date, and 3.02 times as large as the total number of men employed and out of work on that date. The extents to which these average figures are applicable to particular cases can be seen from the following table.

(1) Hebburn: Few women workers, but a large percentage of unemployment.

(2) Adwick-le-Street: Few women workers, and little unemployment.

(3) Todmorden: Large proportion of women workers and little unemployment.

(4) Shulybridge: Large proportion of women workers and high proportion of unemployment.

	(1)	(2)	(3)	(4)
No. employed multiplied by 2.4	13,800	18,300	27,000	23,800
No. employed and unemployed multiplied by 2.1	20,500	17,400	27,600	30,000
Employed and unemployed men multiplied by 3.0	24,000	22,800	23,200	26,000
Actual population	24,000	20,300	22,800	24,800

The method of multiplying the number of people employed by 2.4 gives a result which is far too low in the case of Hebburn where a large proportion of the men

were/

were unemployed, and far too high for Todmorden, where the small number of men out of work was more than offset by the large number of women working.

If the totals of employed and unemployed workers are multiplied by the appropriate average the errors arising from the omission of unemployed are removed, but the results are a little too low where there are few women workers and much too high when they constitute a considerable proportion of the total. This eliminates the hidden correction at Stalybridge, whereby, in the first ~~method~~ calculation, the large number of men unemployed was almost exactly compensated by the large ~~proportion~~ number of women at work, and in this case the result is less exact than by the first method. On the other hand the inclusion of unemployed gives a better result in the case of Hebburn.

The third method, multiplying the total number of men returned as employed and out of work by the appropriate average, gives results with errors of less than 2,500, in each case.

The constancy of this relation between the total of employed and "out of work" men, and the population of the town, in the majority of cases, is more strikingly shown by the graphs (Fig 35-36) on which the population of all urban districts from ~~50~~ 5,000 to a million are plotted, against the number of male workers. It will be seen that it is very rare for the discrepancy from the ratio of ~~1.2~~ 3:1 to exceed 5%. Notable exceptions are provided by health resorts/

resorts and garrison towns. In these, conditions are abnormal: the former have an exceptionally large proportion of families living on pensions and other forms of unearned income, and the latter an exceptionally high proportion of single men.

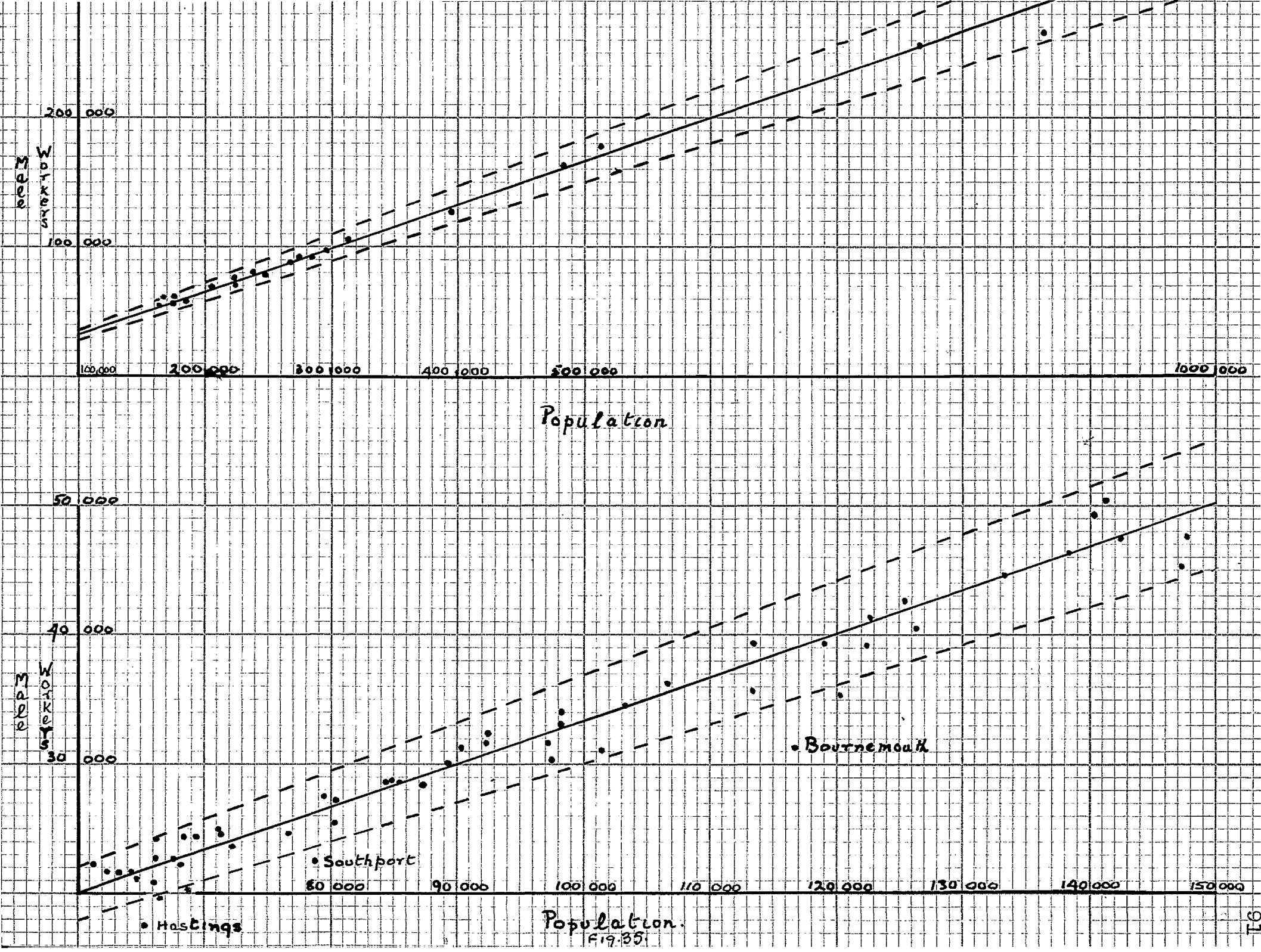

Male Workers
200 000
100 000
100,000
200 000
300 000
400 000
500 000
1000 000
Population
Male Workers
50 000
40 000
30 000
Bournemouth
Southport
Hastings
80 000
90 000
100 000
110 000
120 000
130 000
140 000
150 000
Population.

Fig. 35.

TS

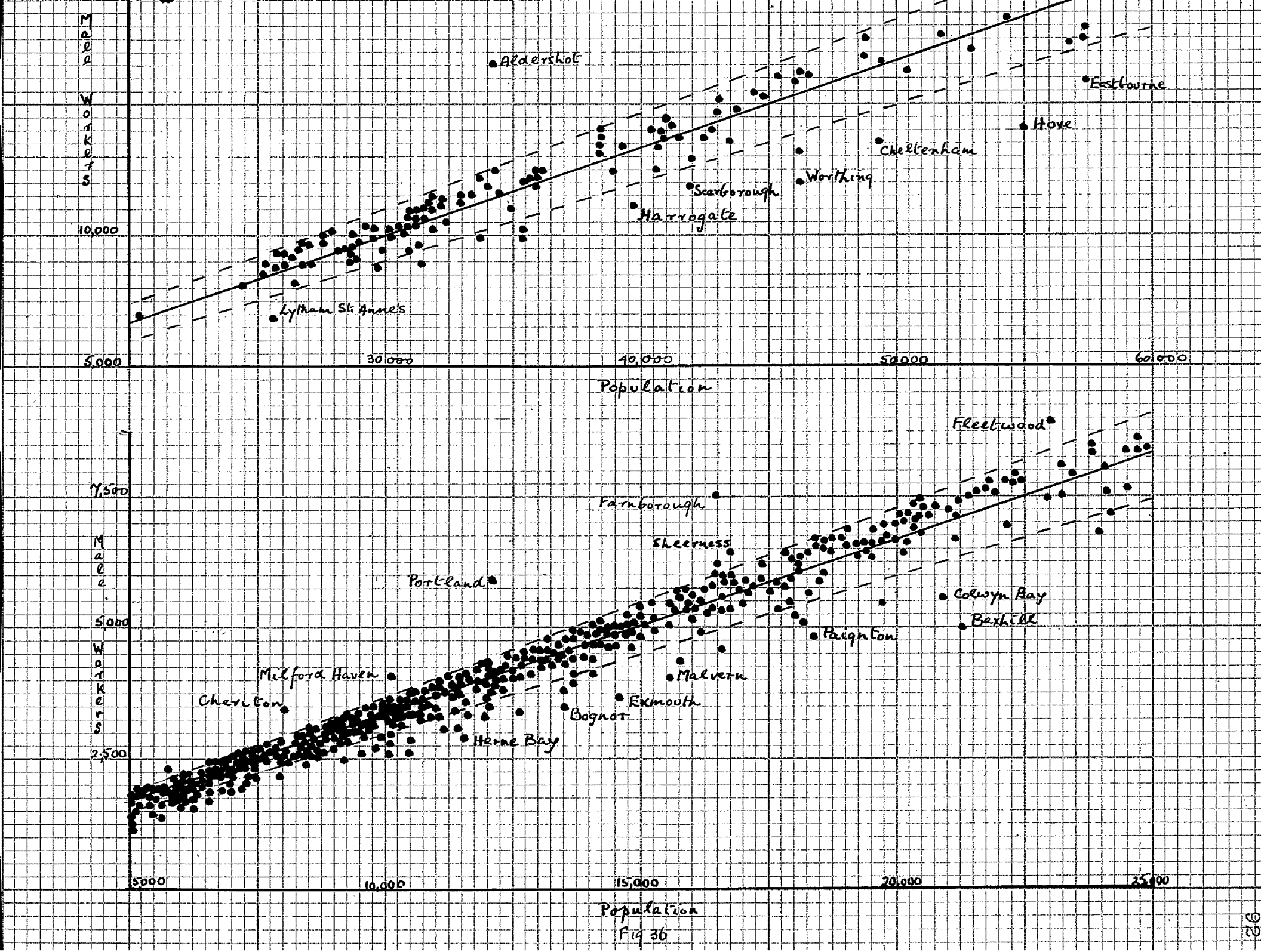

Male Workers
Aldershot
Eastbourne
Hove
Cheltenham
Worthing
Scarborough
Harrogate
Lytham St. Anne's
10,000
5,000
30,000
40,000
50,000
60,000
Population
Male Workers
Fleetwood
Farnborough
Sheerness
Portland
Colwyn Bay
Bexhill
Paignton
Malvern
Milford Haven
Chevelon
Exmouth
Bognor
Herne Bay
7,500
5,000
2,500
5000
10,000
15,000
20,000
25,000
Population

Fig 36

THE RELATION BETWEEN THE NUMBERS OF MEN AND WOMEN ASSOCIATED WITH INDUSTRY.

If an industry employing men is founded to take advantage of a particular site, men will be attracted there. They will settle and make homes and after a short lapse of time the sex ratio and the number of dependents per wage earner will approach normal.

Industries employing men can and must attract new population to their locality if they expand beyond the local labour supply. Industries employing girls, on the other hand, are essentially secondary and dependent on the pre-existing population, and only pay wages sufficient to bring out as workers the necessary proportion of the female population of the town in which they operate. The volume of employment available for girls is seldom equal to the number of potential workers, even at current wage-rates.

Unmarried girls have to be maintained by their families if they do not work, and any money they earn, even if it is less than the complete cost of their maintenance, is a welcome addition to the faily income in all but a very limited number of wealthy families which form a small proportion of the total population and an insignificant proportion in industrial towns. Almost all unmarried girls above school age are potential workers given/

given sufficiently attractive conditions and the small proportion for whom the current rates of pay have insufficient attraction are easily outnumbered by the married women who are willing to go to work to supplement the family income.

In most towns in this country an additional opportunity of earning the current rates of pay would produce the necessary supply of labour from the local population but would not attract any more girls to live in the town. The nt result of the expansion of such an industry would merely be to increase the average family income.

On the other hand if the industries employing an excess of female labour expand faster than those employing male labour in the same town, and the limits of the potential local female labour supply are approached, to obtain further supplies of labour it becomes necessary to offer a wage rate sufficient to attract and maintain independent, girls who would have to pay for their lodgings and maintain themselves completely, instead of the scale of wages sufficient to attract local girls to supplement their family income.

A wage considerably less than the cost of maintenance of an independent girl living in lodgings is sufficient to attract a very large proportion of the potential girl workers in a town of predominantly working class families, but once this supply of cheap labour is exhausted a very considerable increase of wages would be necessary to attract further workers, either from the higher social strata in the town, or girls from other localities putside the range of easy daily/

daily transport. This of course does not apply to domestic servants who are provided with board and lodging. Consequently when an industry employing female labour expands up to the limit of the available supply of cheap labour further expansion in that town becomes uneconomic and any further development must be transferred elsewhere to tap a new supply of cheap labour.

The classic example of this was the expansion of the cotton weaving industry from its original site in South Lancashire to parts of the North Lancashire coalfield, the mining towns of which offered a new supply of cheap female labour. The spinning industry in which equal numbers of men and women are employed could continue to expand at the original sites because the expansion of demand for male labour brought with it a commensurate increase in the supply of cheap female labour.

In England and Wales there were 20,819,267 females to 19,138,010 males, or 1,090 females per 1,000 males. Of the men 11,563,691 were employed and 1,683,742 unemployed, so that there was a total of 13,247,433 potential male workers, equivalent to 69.5% of the male population. On the other hand only 5,606,045 women were at work and 483,064 were returned as unemployed, so that only 5,606,045 women are associated with industry, or only 27% of the female population. The number of women associated with industry in England and Wales was only 42.3% of the males similarly associated./

associated. Thus there is still a considerable difference between the sexes in their relation to industry, although this difference has probably been decreasing steadily and will continue to do so as industry comes more and more to utilize the potential supply of female labour.

There are great variations in the extent to which this potential labour force is used in different towns. The differences are related to the needs of the dominant industries. In mining towns and most metallurgical centres there is very little oppurtunity of employment for women. There are only two Orders, apart from Personal Service, in which the number of women associated with the Order exceeds the number of men; the Clothing industries and the Textile industries. It is particularly in the textile manufacturing towns that the proportion of women associated with paid employment is high.

The following table shows the Urban Districts in which more than 35% of the female population was returned as employed or "out of work".

Towns with over 50,000 inhabitants.

Blackburn	52%	Leicester	41%	Bradford	37%
Burnley	50%	Ashton under Lyne	41%	Salford	37%
Rochdale	52%	Ashton under Lyne	40%	Halifax	36%
Oldham	50%	Bolton	38%	Leeds	36%
Preston	44%	Stockport	38%	Luton	36%
Bury	43%	Stoke on Trent	38%	Nottingham	35%
	42%				
	42%				

Towns with 5,000 to 50,000 inhabitants.

Lancashire

Great Harwood	55%	Clitheroe	45%	Walton le Dale	42%
Clayton le Moors	52%	Colne	45%	Failsworth	39%
Rishton	52%	Chorley	44%	Littleborough	39%
Darwen	52%	Crompton	44%	Little Hulton	39%
Padiham	51%	Bacup	43%	Middleton	39%
Brierfield	49%	Denton	43%	Kearsley	38%
Church	49%	Milnrow	43%	Leigh	38%
Nelson	49%	Mossley	43%	Droylsden	37%
Haslingden	48%	Radcliffe	43%	Tottington	37%
Heywood	47%	Ramsbottom	43%	Leyland	35%
Whitworth	47%	Royton	43%	Swinton and Pendlebury	35%
Barrowford	46%	Chadderton	42%	Westhoughton	35%
Accrington	45%	Farnworth	42%		
		Rawtenstall	42%		

Cheshire

Stalybridge	44%	Hyde	43%	Bollington	39%
~~Glossop~~	~~44%~~	Dukinfield	42%	Congleton	39%
		Macclesfield	42%		

Yorkshire (West Riding)

Cotton manufacturing towns.

Barnoldswick	56%	Earby	49%	Todmorden	43%
		Skipton	38%	Meltham	35%

Clothing Manufacturing town.

Hebden Bridge	47%

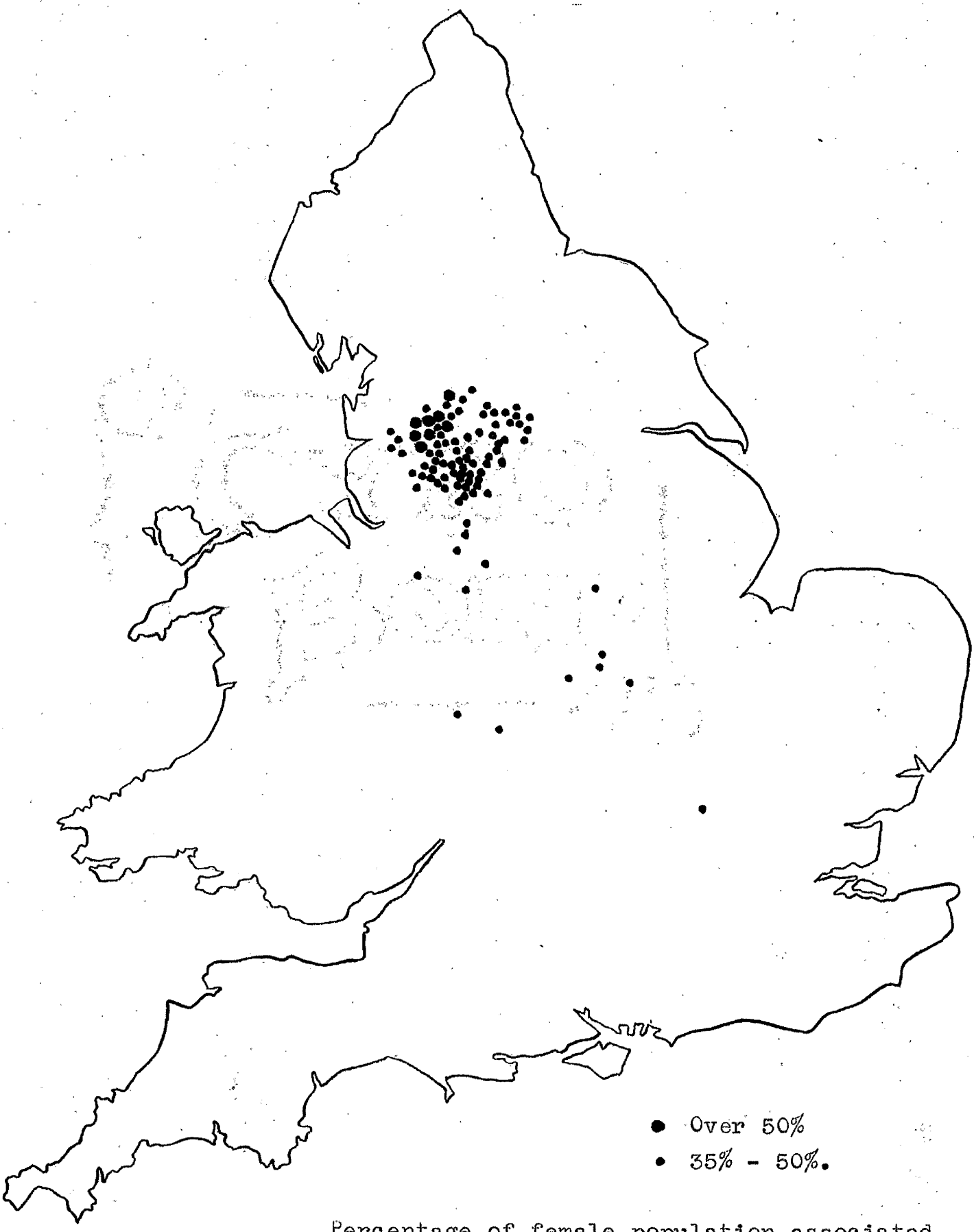
Woollen manufacturing towns.

Haworth	40%	Bingley	36%	Queensbury	36%
Keighley	40%	Elland	36%	Shipley	36%
Marsden	40%	Farsley	36%	Slaithwaite	36%
Morley	39%	Golcar	36%	Sowerby	36%
Batley	38%	Pudsey	36%	Saddleworth	35%
Linthwaite	37%			Yeadon	35%

Other Counties.

Hinckley	46%	Glossop	44%	Kidderminster	37%
Leek	45%	Nantwich	37%	Market Harborough	35%
Redditch	45%			Wigston Magna	35%

It will be seen (fig 37.) that most of these towns are in Lancashire, Cheshire and the West Riding. In the Yorkshire woollen manufacturing towns the proportion of women associated with paid work normally lies between 35% and 40%, the/



Percentage of female population associated with paid work.

Fig.37.

the latter figure being reached in only three cases. In the cotton manufacturing towns, both in Lancashire and the adjacent counties, the most common proportion is between 40% and 50% and in eight of the towns in the middle Ribble and upper Colne Valleys, in which cotton weaving is the predominant activity, the proportion is over 50%; the highest figure is 56% at Barnoldswick, which is a cotton weaving town, although it is in the West Riding of Yorkshire.

The opportunities for employment in these towns have not attracted any significant number of women to migrate to them. This is seen by considering the sex ratios, shown in the following table.

Number of females per 1,000 males.

Average for England and Wales	1,088
Average for Urban Districts	1,107
Rishton	1,186
Blackburn	1,182
Darwen	1,173
Great Harwood	1,167
Burnley	1,137
Padiham	1,137
Clayton le Moors	1,118
Barnoldswick	1,090

Figures from Table 27, General Tables, Census of England and Wales 1931.

It will be seen that in the most extreme case the number of females is less than 8% higher than the average, and that in the town in which the largest proportion of the females are associated with paid labour the proportion of females to males is actually less than the average

for/

for Urban Districts. Consequently it is safe to say that under present conditions it is possible to attract 50% of the normal female population of a town to take up paid work. This may be stated in anotherw way by saying that the reservoir of potential femmle labour in any town is about a fourth of the total population. Thus a town of 10,000 inhabitants provides a potential female labour force of 2,500.

SUMMARY.

In consequence of the many difficulties in the direct use of the diagrams to estimate the actual part played by the different activities in attracting and maintaining the population of a particular town, it is necessary to supplement the proportional diagrams by calculations based on the actual numbers of men employed in the productive industries and the actual number of people employed in providing "Regional Services" in relation to the population of the town.

RELATION BETWEEN WORKERS AND POPULATION IN SPECIALISED TOWNS OF PRODUCTIVE TYPE.

Individual towns tend to be predominantly concerned either with production or with the provision of services but pure types are not common. There were, however, ten towns with over 80% of their workers employed in productive activities, and some of their characteristics are tabulated below.

Town	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Abram	818	6,660	1,801	13.4	270	107	416	16	62
Marsden	814	5,723	1,458	9.7	256	181	396	31	69
Thurnscoe	810	10,548	2,840	9.6	268	206	475	19	45
Adwick le Street	808	20,257	5,874	6.0	290	460	1,032	24	51
Whitworth	803	8,360	1,913	14.5	230	250	590	30	71
Crompton	803	14,764	3,429	17.6	231	340	1,039	23	70
Conisborough	803	18,174	4,982	9.3	275	404	880	22	49
Glyncorwg	803	10,203	2,373	29.0	232	148	442	14	43
Barnoldswick	800	11,914	2,517	26.8	211	372	806	31	68
Bedworth	800	12,055	2,946	10.9	243	365	641	30	53
		118,658	30,252	13.6	253	2,833	6,717	25	57

(1) Proportion of workers employed in production.
(2) Total population.
(3) Number of men employed in production.
(4) Men unemployed as a percentage of men employed.
(5) Number of men employed in production per 1,000 inhabitants.
(6) Number of people employed in "Local Services."
(7) Number of people employed in "Regional Services."
(8) Number of people employed in "Local Services" per 1,000 inhabitants.
(9) Number of people employed in "Regional Services" per 1,000 inhabitants.

These ten towns include varied types; coal mining towns, cotton manufacturing towns and woollen manufacturing towns. Their populations ranged from 5,700 (Marsden) to 20,250 (Adwick le Street). The proportion of unemployed men, to those employed ranged from 6% at Adwick le Street to 29% at Glyncorwg but the average for all the towns was 13.6, which was reasonably close to the national average of 15.3%.

The most important fact that emerges from the table is that on the average there were 253 men employed in production for every 1,000 of the population. This is the basis for the statement that as a general average the number of people supported by a productive activity is four times as large as the number of men employed in it.

It will be seen from the table that the actual proportions per 1,000 inhabitants vary from 211 at Barnoldswick, where the ~~number~~ of unemployed men was 26.8% of the number of employed, to 290 at Adwick le Street where the unemployment rate was only 6%. In the former case the population was 4.95 times as numerous as the number of men employed in productive activities; in the latter case it was only 3.45 times as numerous.

Despite such divergences the use of the ratio 4:1 to deduce the number of people supported, directly and indirectly, by any given number of men employed in a productive activity has been used throughout the country and/

and found to be satisfactory, subject to the following divergences.

In cases where the unemployment rate among men is relatively low the figure obtained by multiplying the number of men engaged in productive activities by four is too high; in cases where the unemployment rate is relatively high the figure is too low. The magnitude of the divergences in the above cases, can be seen from the following table.

	(1)	(2)	(3)	(4)	(5)
Adwick le Street	5,874	23,496	20,257	16%	6.0%
Conisborough	4,982	19,928	18,174	10%	9.3%
Abram	1,801	7,204	6,660	8%	13.4%
Thurnscoe	2,840	11,360	10,548	8%	9.6%
Marsden	1,458	5,832	5,723	2%	9.7%
Bedworth	2,946	11,784	12,055	-2%	10.9%
Crompton	3,429	13,716	14,764	-7%	17.6%
Glyncorwg	2,372	9,488	10,203	-7%	29.0%
Whitworth	1,913	7,652	8,360	-8%	14.5%
Barnoldswick	2,517	10,069	11,914	-16%	26.8%

(1) Number of men employed in productive activities.
(2) (1) x 4.
(3) Actual population.
(4) Percentage by which (2) exceeds or falls short of (3).
(5) Men unemployed as a percentage of men employed.

The greatest divergences are an excess of 16% at Adwick le Street and a deficiency of 16% at Barnoldswick, but where the unemployment rate is between 10% and 20%, that is in the majority of cases, the divergence is less than 10%.

Moreover the direction of divergence is known from the unemployment rate and, if it were thought necessary in any prticular case, a correction could be applied. For example if 4 is the correct multiplier for an unemployment rate/

rate of 15%, a multiplier of 3.5 would be appropriate where there was no unemployment.

In many cases it is desirable to attempt to eliminate the influence of variations of unemployment and this can be done by estimating the number of men who would be employed in production if the rate of unemployment were the same as the average for the whole country, 15%.

The following are the appropriate adjustments for higher or lower actual rates of male unemployment. Where the male unemployment rate is x% adjust the number of men employed in production or the production ratio by y%.

x	0	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	130
y	-13	-9	-4	-	4	9	13	18	22	26	30	39	48	56	65	74	100

Even after these adjustments have been made it may still be found that the actual population of the town ~~differs~~ diverges by as much as 10% from the number appropriate to the standards just outlined, for the standard conditions are only a generalisation and do not represent an absolute mathematical relation governed by physical laws.

Two other relations of importance are also shown by the table; that on the average there are 25 people per 1,000 of population engaged in providing "Local Services" and 57 per 1,000 inhabitants supplying "Regional Services". The ratio engaged in providing "Regional Services" in the above towns varies from 45 per 1,000 inhabitants in Thurnscoe to 71 in Whitworth.

Marsden, situated near the head of a remote, narrow Pennine valley that could not provide a significant tributary area and with more than sufficient men employed in production to support the whole population, has 69 people employed in "Regional Services" for each 1,000 inhabitants. Consequently unless the proportion of people engaged in providing "Regional Services" exceeds 70 per 1,000 inhabitants it may safely be assumed that the provision of "Regional Services" for a surrounding area does not play a significant part in bringing income into the town or in increasing its population.

For purposes of comparison the character of a standard specialised productive town may be defined as follows. In such a town with 10,000 inhabitants there would be 2,500 men employed in productive activities; an unemployment rate of 15% among men; 950 people employed in the provision of services, 250 ofthem in the "Local Services" group and 700 of them in the "Regional Services" group. Such a town would alsi have a 2,500 potential women workers.

Theoretical Type Diagrams for purely Productive Centres.

The problem of the maximum proportion of the workers who could be engaged in production in a specialised productive centre is complicated by two factors; unemployment, and the extent to which the available female labour is used in the productive activities. These may be considered in relation to the conditions at Thurnscoe. There 2,840 men were employed in the productive activities and 680 people in the provision of services. The number of people employed in the provision of services is related to the needs of the population and is not affected, within the limits of the present case, by the extent to which that population is employed. There were 312 men unemployed and if all these had been at work in productive activities the total number of employed workers would have been 3,853, of which the 680 employed in the provision of services would have made 17.5% and the productive workers, 82.5%. The latter seems to be the maximum proportion for productive workers as long as the productive industries employ men only.

On the average throughout England and Wales 27% of the female population was associated with industry, so that even if there were only average opportunities of employment for women in Thurnscoe there would be work available for some 1,350 women instead of the 374 who were returned as being associated with paid work. In some of the textile manufacturing towns 50% of the women were associated with industry

and if this were the case in Thurnscoe the number of women employed would be 2,500, and the total working force in the town just over 6,000, of whom only 680 (12%) need be employed in the provision of services. In such a case 88% of the workers could be engaged in production.

In relation to the average conditions of unemployment in England and Wales in 1931 we may take 60% as the standard percentage of workers employed in production in a completely specialised town in which the productive industries employ only men and 85% in towns in which the available supply of female labour is also used in production. In such centres one third of the remaining workers would be employed in the "Local Services" group, and two-thirds in the "Regional Services" group.

These facts may be applied to the different productive types and the corresponding diagrams are shown on the following page.

Similar arguments may be used to determine the proportions and the diagrams for the greatest possible degree of specialisation in certain types of towns providing particular services.

There is no reason to suppose that a given number of railway operatives needs a larger or smaller number of people to provide them with services than the same number of men employed in a railway workshop. The only difference in the diagram would be that the workers employed in the dominant Order (80%) would appear in column 5 instead of in one of the first three columns.

The last diagram shows the distribution of workers in the most specialised possible railway operating centre. A completely specialised port would have a similar diagram. The same standard may be used to consider the extent to which Newmarket and Bodmin are specialised on amusements and administration respectively. The contrast between the diagram for a completely specialised "Port" and the diagrams for Liverpool and London is particularly instructive.

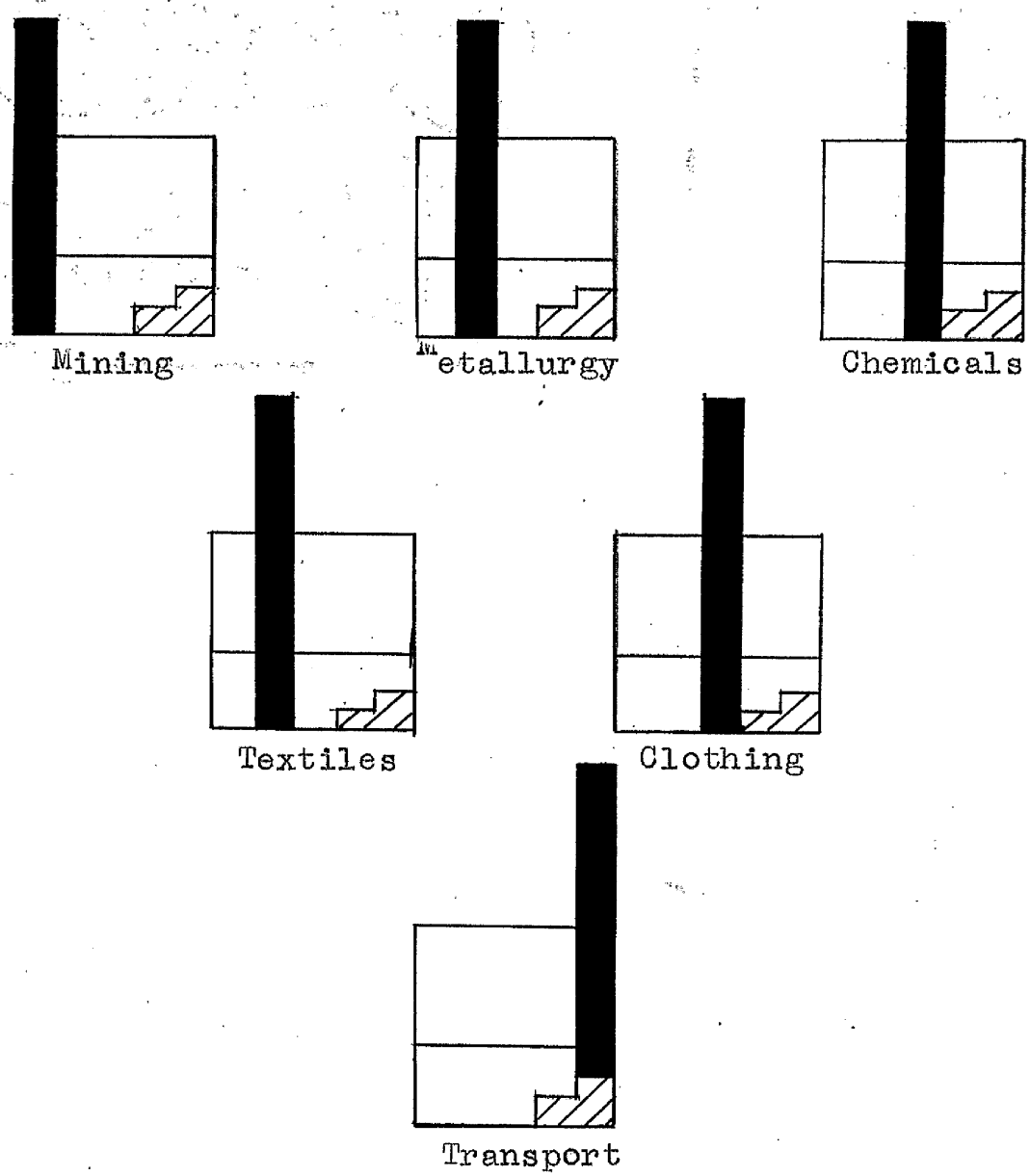


Fig.38.

REGIONAL CENTRES.

The local regional centre or market town is one of the most familiar forms of settlement. The essential function of such a town is to provide a balanced range of regional services for its dependent area. The following 59 towns with populations between 5,000 and 50,000 have over 50% of their workers engaged in this group of Orders. Those known to be abnormal, either in having an exceptionally high degree of specialisation on one activity, or in being merely residential suburbs of larger centres are marked 'x' and omitted from further consideration.

Towns with over 50% of their workers employed in

"REGIONAL SERVICES".

x	Aldershot	80.1	
x	Farnborough	79.6	
x	Cheriton	71.5	
x	Showburyness	68.7	
x	Goole	67.5	
x	Harwich	66.2	
x	Newhaven	65.6	
x	Gosport	64.4	
x	Bodmin	64.0	
x	Barry	63.5	
x	Portland	63.5	
x	Walmer	62.1	
x	Frimley and Camberley	59.8	
x	Hoole	59.7	
	Brecknock	59.1	
	Abergavenny	59.0	
	Oswestry	58.8	
	Pembroke	58.5	
	Bangor	57.9	
x	Waterloo with Seaforth	57.8	
x	Fulwood	57.4	
x	Tilbury	5713	
	Caernarvon	57.3	
	Dover	57.2	
x	Dartmouth	57.2	
	Bishop Auckland	56.6	
	Salisbury	56.4	
	Shrewsbury	56.2	
	Bridgend	55.7	
x	March	55.3	
	Colchester	55.2	
	Truro	55.0	
x	Brentwood	55.0	
	Garmarthen	54.9	
	King's Lynn	54.6	
	Penzance	54.6	
	Berwick upon Tweed	54.4	
	Dorchester	54.4	
x	Weymouth	53.8	
	Haverfordwest	53.6	
	Winchester	52.8	
x	Newmarket	52.7	
x	Bletchley	52.7	
	Chichester	52.6	
	Newport (I.O.W.)	52.5	
	Durham	52.3	
x	Great Crosby	52.2	
x	Penarth	52.0	
x	West Bridgford	52.0	
x	Felixstowe	51.9	
	Penrith	51.8	
	Sleaford	51.6	
	New Windsor	51.6	
	Ludlow	51.2	
x	Whitley Bay and Monkseaton	51.2	
	Denbigh	50.9	
	Conway	50.8	
x	Romford	50.7	
	Canterbury	50.3	
	Aberystwyth	50.2	
x	Formby	50.2	

In the following section an attempt will be made to estimate the theoretical distribution of workers by industrial Orders in a town which is merely a regional centre, and the conclusions will be checked against the actual conditions of the 31 towns listed above as being most likely to approximate to the theoretical type.

PRIMARY PRODUCTION.

In a pure market town the proportion of the workers engaged in primary production should be negligible. Mining and fishing are not part of the functions of a market town. There are, however, normally a few gardeners and farm workers.

Of the 32 towns listed 21 have no fishermen and the highest proportion engaged in fishing is 2.7% at Berwick upon Tweed. Similarly 18 of them have fewer than 1% of their workers engaged in mining or quarrying and the highest proportion is 9.8% at Durham. The lowest proportion engaged in agriculture in any of these towns is 0.6% at Durham. This is understandable in view of the restricted and cramped site of Durham. It helps to confirm the view that even agriculture is not a necessary activity in a regional centre. In actual fact however, the proportion normally lies between 2% and 5%, as long as the boundary of the Urban District corresponds reasonably closely to the built-up area, and does not include a considerable area of agricultural land.

It may be concluded that although a theoretically perfect regional centre would have no workers engaged/

engaged in primary production, 2% is a reasonable ~~minimum~~ standard under normal conditions in this country; to represent a handful of quarrymen and a few gardeners and farm workers.

MAJOR INDUSTRIES.

Textile industries are not an essential feature of regional centres, but some forms of the metal industries are. The latter are normally of small scale and varied character, with vehicle repairing as the largest single branch.

Of the above towns only 5 have over 1% of their workers engaged in textile manufacturing, but 1.8% of these workers is the minimum proportion engaged in the metal industries.

These varied metal industries catering for the local needs, provided a field of experience and experiment from which, in some places there grew metal industries and engineering industries which cater for wider markets; the majority of moderate sized towns have a small foundry or engineering works, and in many cases such industries have grown to a sufficient importance to modify the character of the town considerably.

Most of these towns have from 2% to 5% of their workers so employed. Thus we might regard 2% as the theoretical minimum and 5% as a normal figure in practice.

MINOR MANUFACTURING INDUSTRIES.

Three of the minor manufacturing Orders, Bricks etc., Chemicals, and the Leather industries are not essential to regional centres and are completely absent from most of the towns, ~~but~~ although tanning, small brickworks, and chemical industries, such as the manufacture of sheep dips, fertilizers and cattle cake are occasionally carried on in a few regional centres. Among the towns listed above Bishop Auckland has 1% of its workers engaged in brickworks, King's Lynn 3.5% in chemical industries and Canterbury nearly 2% engaged in tanning.

The other four Orders may be regarde d as essential to the function of the regional centre. There are normally sufficient of the common food industries to provide for the needs of the town and, in addition, milling grain and brewing are very characteristic of market centres in agricultural districts. The minimum proportion in this Order among these towns is 2%, and 3% ~~is the normal~~ may be taken as the standard proportion.

The provision of clothing, including some forms of manufacture, is also a normal function of a regional centre and none of the above towns has less than 1% of its workers employed in this Order and 2% may be ~~regarded as normal.~~ taken as the standard

Wood working industries are also found in all the towns. The minimum proportion is 0.5% and the normal about 1%. Printing is also carried on in all such towns; in addition

to/

to jobbing printing, a local newspaper is published in most of them. The minimum proportion of the workers engaged in printing is 1% and 2% may be taken as the standard.

Thus the theoretical minimum percentage engaged in the minor manyfacturing industries cannot well be less than 5% and 8% may be regarded as a standard percentage.

LOCAL SERVICES.

Market towns are tolerably well provided with local services. The provision of gas, water and electricity occupies between 1% and 2% of their workers. The proportion employed in building and contracting varies between 4% and 8%. There is always a considerable proportion of the workers employed in personal service. Among the above examples the proportions vary between 12% and 29.5%. The latter, however, is abnormal and found only at Aberystwyth, a seaside resort, and the former at the most industrialised of the towns, Colchester. Among the other towns the minimum is 14%. The minimum for the whole of Local Services group may be taken to be 20% and the standard proportion 25%.

REGIONAL SERVICES.

Thus the theoretical minimum proportion necessary in groups other than regional services is 27% which would leave 73% of the workers available for regional services. The standards selected above as representative, on the other hand, total 40% leaving 60% for regional services.

services. The towns listed, from which any with very specialised services have been omitted, have between 50% and 59% of their workers engaged in regional services.

There is some variation in the proportions of workers engaged in the different services. The provision of entertainments normally employ about 1% of the workers; the proportion engaged in professional services varies from 2.5% to 13% and averages about 5%; Administration and defence occupy between 7% and 28%. National defence is not one of the essential functions of a local regional centre and unless the town is a naval dockyard or has barracks the proportion in this Order does not exceed 20%; the normal proportion is about 15%.

The proportion engaged in transport also varies considerably. The inland market towns are not centres of water transport but all of them are centres of road transport and some of them are quite important railway operating centres

The proportion employed in this Order varies accordingly from 4% to 20% and the normal proportion is about 10%. The commercial and financial activities employ from 17% to 30% of the workers and the normal proportion is about 25%. Thus a town providing a normal range of regional services, without having an excessive proportion of its workers engaged in regional services; might well have the

following proportions of its workers employed in the various Orders grouped under the "Regional Services":

Commerce and Finance	25%
Administration and Defence	15%
Transport	10%
Professions	5%
Entertainments	1%

The figures in the following table, and the three diagrams, show the relations between the different groups outlined above for a completely specialised regional centre; for a standard regional centre of British type, and for Salisbury.

	(1)	(2)	(3)
Primary Production	20	20	19
Major Industries	30	50	34
Minor Industries	50	80	86
Local Services	200	250	289
Regional Services	730	600	564
Total Production	70	150	139
Total Services	930	850	853

(1) A completely specialised regional centre.
(2) Standard proportions for a British Regional centre.
(3) Salisbury.

Fig. 39.

THE RELATION BETWEEN WORKERS AND POPULATION IN REGIONAL CENTRES.

The 10 towns in England and Wales that correspond most closely to the standard regional centre are listed in the table below. Their populations range from 5,300 (Brecknock) to 32,300 (Shrewsbury).

Town	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Brecknock	59.1	1,347	5,332	253	279	52	144	15%
Abergavenny	59.0	1,903	8,608	220	409	47	159	17%
Oswestry	58.8	2,316	9,754	237	589	61	174	11%
Bangor	57.9	2,560	10,960	235	605	55	155	9%
Caernarvon	57.3	1,743	8,469	208	487	57	180	22%
Salisbury	56.4	6,240	26,460	235	1,306	49	139	8%
Shrewsbury	56.2	7,596	32,372	235	2,011	62	189	11%
Truro	55.0	2,574	11,064	234	660	60	188	10%
Penzance	54.6	2,577	11,331	229	590	52	153	10%
Dorchester	54.4	2,402	10,030	240	694	69	186	9%
		31,258	134,380	234	7,630	57		

(1) Percentage of workers employed in "Regional Services"
(2) Number of workers employed in "Regional Services"
(3) Population.
(4) Number of workers in "Regio nal Services" per 1,000 inhabitants
(5) Number of men employed ~~xxxx~~ in productive activities.
(6) Number of men employed in productive activities per 1,000 inhabitants.
(7) Proportion of workers employed in productive activities per 1,000 workers.
(8) Unemployed men as a percentage of employed men.

The most important fact brought out by the above table is that on the average in these ten towns there were 234 people employed in the "Regional Services" for every 1,000 of population. This is the basis for the statement that as a general rule the number of people supported by the regional function is 4¼ times as large

as the number of people employed in the "Regional Services" group.

The actual proportions vary from 253 per 1,000 at Brecknock to 208 per 1,000 at Caernarvon. This is a considerably smaller range of divergence than was found in the corresponding figure for specialised production centres, and most of the above towns have proportions which are very close to the average. The exceptionally low proportion at Caernarvon is [illegible] associated with an exceptionally high proportion of male unemployment, 22%, compared with a normal figure of about 10% in the other towns.

The chief way in which individual towns diverge from the standard type of regional centre is in the proportion of workers associated with productive activities. This varies from 139 per 1,000 workers at Salisbury to 189 per 1,000 workers at Shrewsbury, compared with a standard proportion of 150 per 1,000 workers.

In terms of the total population the proportion of men employed in productive activities averages 57 per 1,000 and the actual figures range from 47 per 1,000 at Abergavenny to 69 per 1,000 at Dorchester. ~~Although~~ This is a comparatively small range but in this case it is not the average that is significant but the nearest approach to a standard minimum proportion and that is approximately 50 per 1,000 of population, as may be

seen from the five towns in which the proportion of workers employed in productive activities most nearly approaches the standard of 150 per 1,000 workers.

Town	(1)	(2)
Salisbury	139	49
Brecknock	144	52
Penzance	153	52
Bangor	155	55
Abergavenny	159	47

(1) Proportion of workers employed in productive activities per 1,000 employed workers.
(2) Proportion of workers employed in productive activities per 1,000 population.

In cases where the number of men employed in productive activities exceeds 50 per 1,000 of population the productive activities have been developed beyond the needs of the town as a regional centre, and have contributed something to the growth of the town independently of the regional function.

This throws light on the exceptional case of Caernarvon. The exceptionally low proportion of the people employed in "Regional Services", 208 per 1,000 is due to the fact that a productive activity has attracted additional people to the town, although at the time of the census there was a high rate of unemployment among the men associated with it.

The excess number of men employed in productive activities; the number of people they support, and the

net number of inhabitants in each town who are supported by the regional function, are listed in the following table.

Town	(1)	(2)	(3)
Brecknock	10	40	5,292
Abergavenny	-	-	8,608
Oswestry	107	428	9,326
Bangor	55	220	10,740
Salisbury	-	-	26,460
Shrewsbury	376	1,504	30,868
Truro	110	440	10,624
Penzance	22	88	11,247
Dorchester	90	360	9,670

(1) Number of men employed in productive activities in excess of the standard of 50 per 1,000 of population
(2) (1) x 4; The number of people supported directly and indirectly by this excess of productive workers.
(3) Net population dependent on the regional function; equals the actual population minus (2).

The probable error involved in using $4\frac{1}{4}$ as a multiplier to estimate the number of people supported by the regional function may be judged from the following table.

Town	(1)	(2)	(3)	(4)
Oswestry	2,316	9,850	9,326	+6%
Dorchester	2,402	10,200	9,670	+6%
Shrewsbury	7,596	32,300	30,868	+5%
Brecknock	1,347	5,720	5,292	+4%
Truro	2,574	11,000	10,624	+4%
Bangor	2,560	10,850	10,740	+1%
Salisbury	6,240	26,500	26,460	-
Penzance	2,577	11,000	11,247	-2%
Abergavenny	1,903	8,100	8,608	-6%

(1) Number of people employed in "Regional Services".
(2) (1) x $4\frac{1}{4}$.
(3) Net population dependent in the regional function.
(4) Percentage by which (2) exceeds or falls short of (3).

In no case in the above table does the divergence exceed 6%. Although the direction of divergence cannot be predicted, its magnitude is comparatively small, and since the divergences in either direction are approximatley equal, no general improvement is to be expected by the use of any other multiplier.

The relations deduced above may be tested on the figures for Caernarvon. The number of people employed in regional services was 1,743, which is appropriate to a regional centre of approximately 7,500 inhabitants. The actual population exceeded this figure by a thousand. If the additional population had been attracted by the development of productive activities there should be a total of 625 men employed in productive activities, 250 in excess of the standard number for a town of that size (375). Actually only 487 men were employed in productive activities and the difference is consistent with the exceptionally high rate of male unemployment.

Standard Regional Centre.

For purposes of comparison the concept of a "standard regional centre" has already been defined in terms of the proportions of the workers employed in the different groups, and in the Orders of the "Regional Services" group. It is also convenient to define the concept in terms of the number of people who would be employed in these groups and Orders in a standard town of 10,000 inhabitants. In such a town out of a total of about 4,000 workers there would be 2,350 employed in the "Regional Services" group, about 1,000 in the "Local Services" group, 300 in the minor manufacturing industries, 200 in the major manufacturing industries (almost exclusively in the metallurgical industries) and 80 in the primary production group (almost entirely in agriculture). There would be a total of 500 men employed in all forms of productive activity. Among the Orders of the "Regional Services" group the standard distribution of the workers would be approximately as follows; Commerce and Finance (1,000, Administration (excluding defence),600, Transport, 400, Professions, 200 and entertainments,40.

It is valuable to compare the actual figures for ~~Dorche~~ Dorchester, which diverges more than most of the ~~other~~ ten towns selected as representative regional centres from the standard, to see how slight the divergences are.

	Dorchester	Standard
Population	10,030	10,000
Primary Production	122	80
Major Industries	223	200
Minor Industries	469	300
Local Services	1,094	1,000
Regional Services	2,402	2,350
Commerce and Finance	1,094	1,000
Administration and Defence	483	600
	327	-
Transport	271	400
Professions	204	200
Entertainments	23	40
Men employed in productive activities	694	500

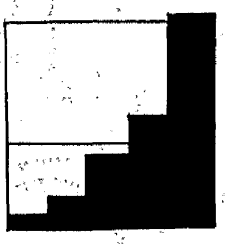
The chief divergences, neither of them of great importance, are an excess of men in productive activities, but the excess is less than 200, chiefly employed in the minor industries, and a garrison of 327 soldiers, making an excess of about 200 in the Administration and Defence Order.

There are two other incidental characteristics of regional centres that may be mentioned. Firstly that the proportion of unemployed men is generally considerably less than the natural average. Secondly, a characteristic that may be of increasing importance, that the proportion of the female population associated with paid work is generally only about half of the potential maximum (50%). Such towns offer a considerable reserve of female labour, about equal to the number of women employed in paid activities at the time of the census. In addition to the labour available in the town itself, large numbers could also be attracted from the surrounding/

surrounding countryside, to daily work in such convenient centres.

For ordinary manufacturing industries, as well as for those seeking reserves of female labour, the larger regional centres have offered greater attractions than the smaller ones and consequently it is only among the smaller ones that we find regional centres approaching the standard type, for most of the larger ones have been modified to a greater or less extent by the extension of manufacturing industries.

Among the large towns the only one that approximates to the type of the simple market town is Exeter(66,000).



Exeter
Fig.40

The chief difference between the diagram for Exeter and those of the smaller regional centres is the slightly greater proportion of the workers employed in production: 24.3% compared with a standard of 15%.

On the other hand in some of the famous old market towns and county centres the development of industry has proceeded to such an extent that the characters of the towns have been profoundly altered. Lincoln and Oxford are old market centres with considerable modern industries, whilst Coventry, Leicester and Nottingham are among the leading industrial towns in the country.

MIXED TYPES.

Production and the provision of regional services are the two most common functions of towns but it is rare to find either in a state of even relative isolation and complete purity of type is unknown. In studying most towns the chief problem is to decide what number of its inhabitants is supported by each of the functions.

The conditions in towns of the two extreme types have been considered, and from the relations found between the number of workers and the population in these towns, the appropriate relations have been found for a standard productive centre and a standard regional centre, so that the conditions in all individual cases may be considered in relation to these fixed standards. In a specialised productive centre the total population is four times as large as the number of men employed in productive employment - with a divergence of less than 10% in normal cases. In such towns, with no regional function, the number of people employed in the "Regional Services " group should not exceed 70 per 1,000 inhabitants.

In a specialised regional centre the population is 4½ times as large as the number of people employed in "Regional Services", with a divergence of less than 6% in normal cases and if productive activity has not played an independent part in the growth of the town the number of men employed in productive activities should not exceed 50 per 1,000 inhabitants.

The existence of mixed types and the relative frequence of the different proportions is shown by the dispersion diagram (Fig. 41) This has been based on the ratio of the number of people employed in "Regional Services", to the total population, in all urban districts with populati ons between 5,000 and 50,000. (Table 13) The ratio of people employed in "Regional Services" has been chosen, instead of the complementary ratio of the number of men employed in productive. activities, since the latter is greatly affected by variations in the unemployment rate.

The diagram shows several significant features. The individual towns are grouped around two modes; there are 99 cases in which the ratio lies between 70 and 90 and 76 cases in which it is between 150 and 170. There are 70 cases in which the ratio is below the standard selected for a productive town, without any regional function (70 people employed in Regional Services per 1,000 inhabitants), but there is a very rapidd decrease in the number of cases as the ratio decreases. Among these 70 towns the lowest ratio of people employed in the "Regional Services" group is 43 per 1,000 of the population in the small mining town of Maltby, (10$010) in the West Riding.

The decrease in the number of cases as the ratio increases is much more gradual, especially in the classes where the ratio exceeds 220 per 1,000. There are twelve cases in which the ratio exceeds the standard taken for a town completely dependent on its regional functions (250

people/

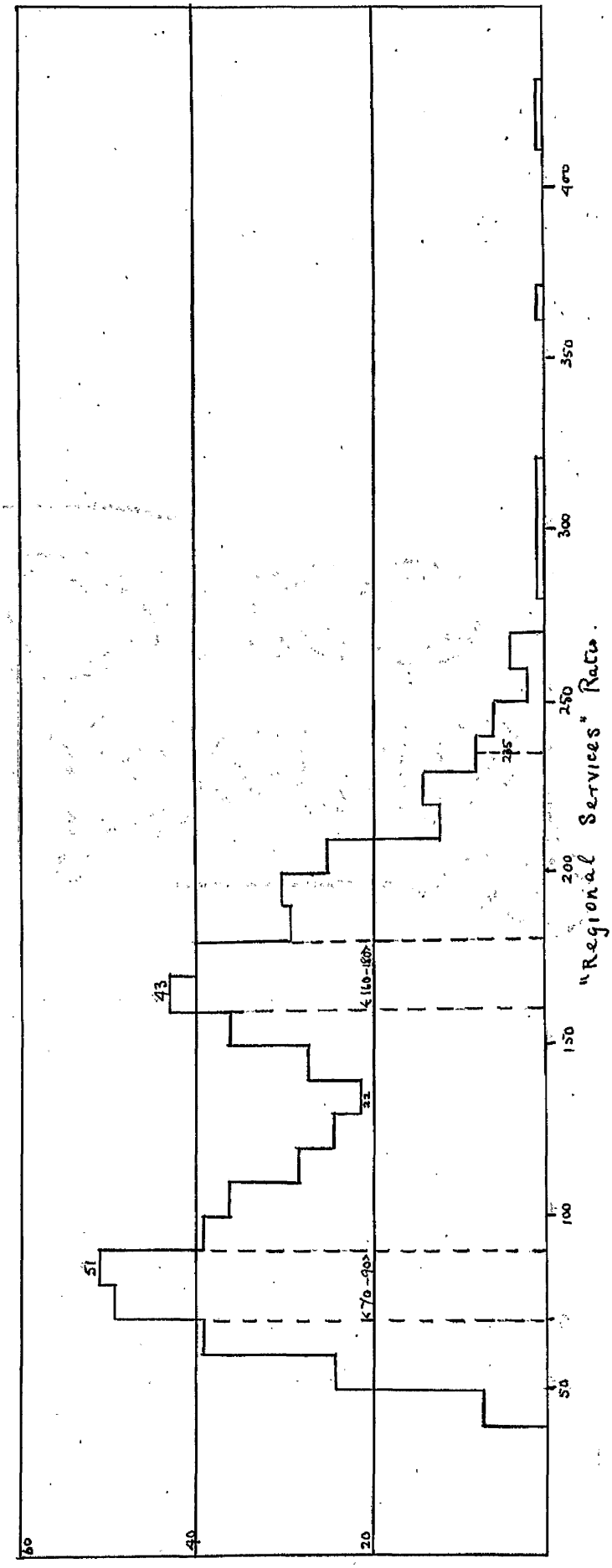


Fig.41. Dispersion Diagram showing the number of Urban Districts with ~~KMMXXMMM~~ 5,000 to 50,000 inhabitants, in which the the "Regional Services" ratio lies within the specified limits at intervals of ten.

people employed in "Regional Services" per 1,000 inhabitants and three cases in which the ratio is abnormally excessive. The highest ratio is 436 per 1,000 inhabitants at Aldershot. On the other hand, there are only 46 cases in which the ratio lies between 120 and 140 per 1,000.

The following interpretation is placed upon the dispersion diagram.

1) The first mode (70 -90 people employed in "Regional Services" per 1,000 inhabitants) represents productive centres in which the number of people employed in this group of services approximates closely to the needs of the population of the town itself, but where there is little or no excess, available to supply the needs of a surrounding region.

2) In the towns in which the ratio is lower, the provision of services is deficient, either because the spending capacity of thd r inhabitants is below the national average, or because some of the services are provided from other centres.

Both the size and the distribution of these towns is significant. All but fifteen of them have fewer than 20,000 inhabitants, and not a single one of them is situated in south eastern England; south east of the conventional line from the Severn to the Humber.

On the other hand, almost all of them are found in five limited districts; 19 on the Yorkshire, Nottinghamshire and Derbyshire coalfield, especially in the Barnsley distr' 14 small mining communities on the South Wales coalfie.

coalfield, 10 in the Black Country, among which there are more small industrial towns than mining districts, 4 small mining communities in the South Lancashire coalfield between St. Helens and Wigan.

Outside these five districts there are only 8 other isolated cases; the three small remote and highly specialised woollen manufacturing towns of Marsden, Linthwaite and Slaithwaite, the remote and highly specialised cotton manufacturing town of Barnoldswick, the Cleveland iron-mining district of Skelton and Brotton, Billingham, the site of a modern large scale chemical industry, the small Leicestershire town of Shepshed, and Flint in North Wales.

Such cases illustrate the very restricted range of services on which the life of a town can be carried on, with or without supplementary services from outside, but they do not throw any light on the problem of determining the ratio in a town which has just sufficient people employed in "Regional Services" to enable it to begin to act as a functional regional centre for a surrounding area. If the minimum ratio were taken as the standard, then all other towns would have to ~~exercise~~ be regarded as owing some of their growth to the exercise of regional functions, when it is manifest for example, that the Yorkshire mining settlements plotted on the map have no regional function; their very arrangement, in close contiguity, leaves them no possible dependent areas.

3) The dispersion diagram shows the comparative rarity/

Fig.42.

Urban Districts in which the "Regional Service" Ratio is below the standard; 70 per 1,000 inhabitants.

rarity of cases in which the ratio of people employed in "Regional Services" approximates to the standard set up for a town entirdy dependent on its Regional function (235 people per 1,000 inhabitants). There are only 27 cases in which the ratio is between 220 and 250, i.e. within about 5% of the standard. There are twelve cases in which the excess is greater than this,

Aldershot	436
Farnborough	428
Portland	316
Frimley and Camberley	297
Cheriton	360
Walmer	282
Newhaven	268
Gosport	264
Fulwood	262
Dartmouth	260
Hoole	254
Brecknock	253

Shoeburyness 300

All of those in which the ratio exceeds 270 are defence centres (garrison towns or naval bases) types which were not expected to fit into the normal scheme.

The case of Aldershot, (34,280) where 11,361 men were associated with the defence services, a ratio of 340 per 1,000 inhabitants, shows that in a town which is almost exclusively a garrison centre the population is approximately 3 times as large as the number of soldiers. This ratio is confirmed by the conditions in Farnborough (16,356) where there were 5,664 men in the defence services; a ratio of 345 per 1,000 inhabitants.

~~Consequently/~~

Consequently this ratio should be used in estimating the number of people supported by the garrison in any town. It is probable that the ratio is similar but not identical in naval bases.

Methods of Analysing Mixed Types.

The fact that both productive centres and regional centres have workers employed in production and "Regional Services" creates difficulties in analysing the relative importance of these two functions when they occur together, as they do in some degree in all towns.

There are three ways in which such an estimate may be made.

(1) From the proportions of the workers employed in production and services respectively.
(2) From the proportions employed in the significant groups.
   a. From the ratio of the men employed in production per 1,000 inhabitants.
   b. From the ratio of people employed in regional services per 1,000 inhabitants.
   c. From the difference between these two ratios.
(3) By using the standard multipliers on the appropriate groups of workers, and then correcting the excessive figures so obtained.

Any of these methods may afford supplementary evidence to confirm or throw suspeicion upon results obtained by another method. Each method is, however, liable to particular forms of error and it is desirable to know which will be most satisfactory for general use

(1) From the proportion of the workers employed in production and services respectively.

We have shown that in a specialised productive centre about 80% of the workers are employed in production and 20% in all services, and that in regional centres the proportions are about 15% employed in production and 85% in all services. It has also been shown that when the two functions are of equal importance the proportions are about 45% employed in production and 55% in services.

The proportions shown by the diagrams may, however, be misleading in two ways.

i) If a large number of women are employed in production the productive function will have a greater apparent relative importance, and the regional function a correspondingly smaller apparent relative importance than is warranted by the parts they play in supporting the population.

ii) On the other hand, a high rate of unemployment among male productive workers may greatly reduce the apparent relative importance of the productive activities and correspondingly increase the apparent relative importance of the regional services.

These alterations may even go so far as to make the apparent relative importance of the two functions the reverse of their real importance and may give to a depressed industrial town the appearance of having a

regional function that it has never possessed. Such differences between the apparent relative importance and the true relative importance of the two functions is particularly liable to occur in the cases where there is only a small difference between them.

By this method it is only possible to distinguished those towns which approximate to either of the extreme types from those in which the two functions are of more equal importance and it is not possible to make an accurate estimate of the relative importance of the two functions.

2a) From the ratio of men employed in production per 1,000 inhabitants.

The standards taken for the productive centre and the regional centre are 250 men per 1,000 inhabitants and 50 men per 1,000 inhabitants respectively. It is possible to calculate the ratio of men employed in production per 1,000 inhabitants in cases in which these two standards are combined in any proportion. The following table gives some of the figures.

Percentage of population dependent on production	Number of men engaged in production per 1,000 inhabitants
100	250
90	230
80	210
70	190
60	170
50	150
40	130
30	110
20	90
10	70
0	50

The figures for any intermediate proportion may be read from the graph (Fig. 43).

The equation for this relation is

yP equals 2xP + 50

When yP is the number of men engaged in production per 1,000 inhabitants
and xP is the percentage of the population dependent on the productive activities.

consequently xP equals $\frac{1}{2}$(yP - 50) or $\frac{1}{2}$yP - 25.

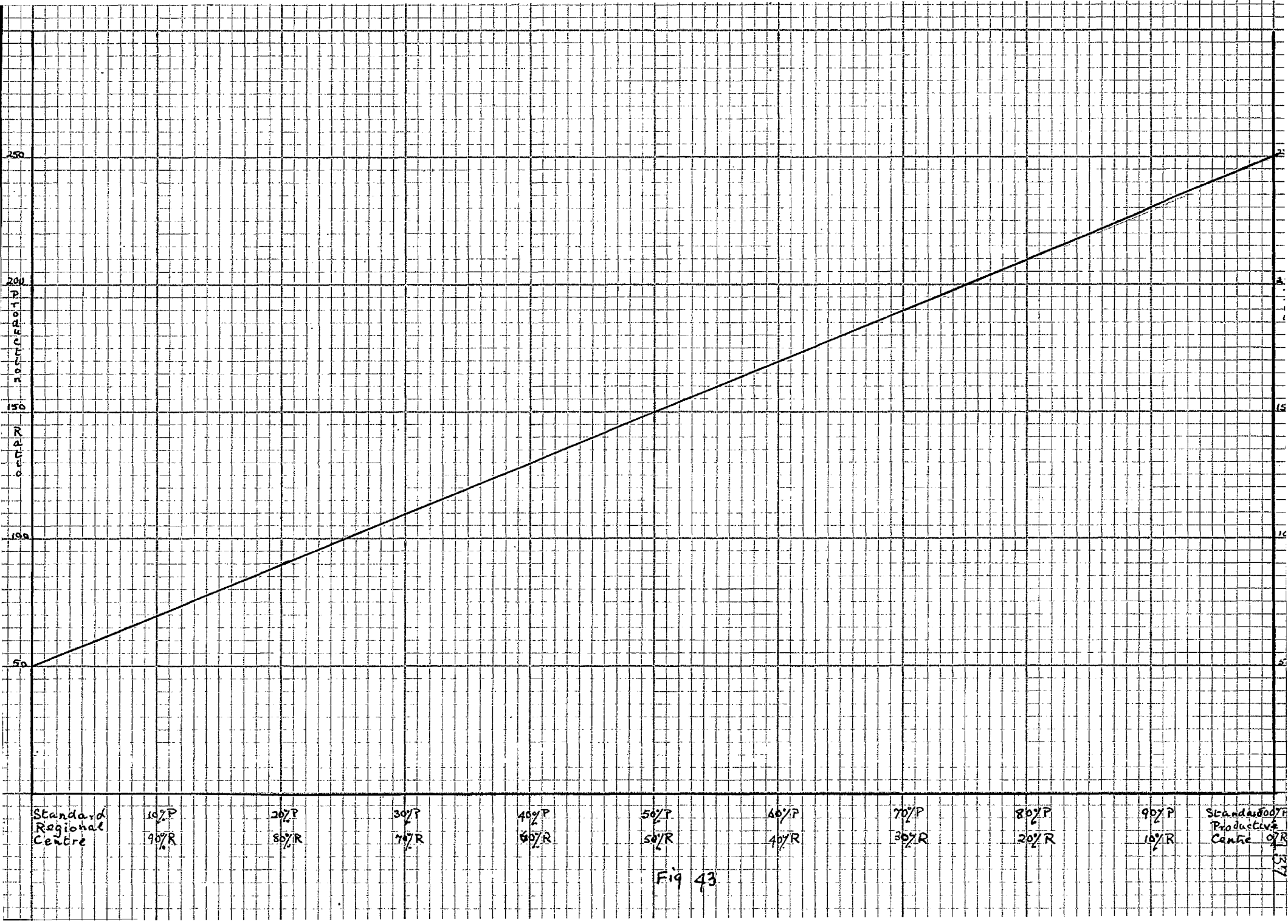

250
200
150
100
50
Regional Centre
Standard Regional Centre
10%P 90%R
20%P 80%R
30%P 70%R
40%P 60%R
50%P 50%R
60%P 40%R
70%P 30%R
80%P 20%R
90%P 10%R
Standard Productive Centre 0%R

Fig 43

The basic figure, the number of men employed in production per 1,000 inhabitants, is affected by the rate of male unemployment, and all calculations based on it are correspondingly affected. The standard figure of 250 men employed in production per 1,000 of population was chosen in relation to the average rate of male unemployment (15%), and consequently this method is most accurate when the rate of male unemployment, in the town under consideration, approximates to the national average. The results are progressively too high with lower values of the male unemployment rate, and progressively too low as the unemployment rate, increases above the national average. This method will give the minimum proportion of the population that must be attributed to independent productive activities in a regional centre.

2b) From the proportion of people employed in Regional Services per 1,000 inhabitants.

The standards taken are 2,350 people employed in Regional Services per 1,000 inhabitants in the standard Regional centre and 70 people per 1,000 inhabitants in the standard productive centre. It is possible to calculate the number of people employed in "Regional Services" per 1,000 inhabitants in cases in which these standards are combined in any proportion. The following table gives some of the figures.

Proportion of the Population dependent on "Regional Services"	Number of people engaged in "Regional Services" per 1,000 inhabitants.
100	235
90	218
80	202
70	186
60	169
50	153
40	136
30	120
20	103
10	87
0	70

The figures for any intermediate proportion can be read from the graph (Fig.44).

The equation for this relation is

$$yR \text{ equals } 1.65xR - 70$$

when yR is the number of people employed in Regional services per 1,000 inhabitants
and xR is the percentage of the population dependent on the regional function.

consequently $$xR \text{ equals } \frac{yR - 70}{1.65}$$

The basic figure, the number of people employed in "Regional Services" per 1,000 inhabitants is much less affected by variations of unemployment than is the number of men in productive employment. Consequently it may be used in a complementary way to estimate the proportion of the population dependent on <u>production</u> in a town in which the previous direct method is vitiated by a high rate of unemployment, among productive workers. Any method which depends on using a "remainder" eliminates all possibility of detecting ~~errors~~ divergences and should only be used to obtain an approximation/

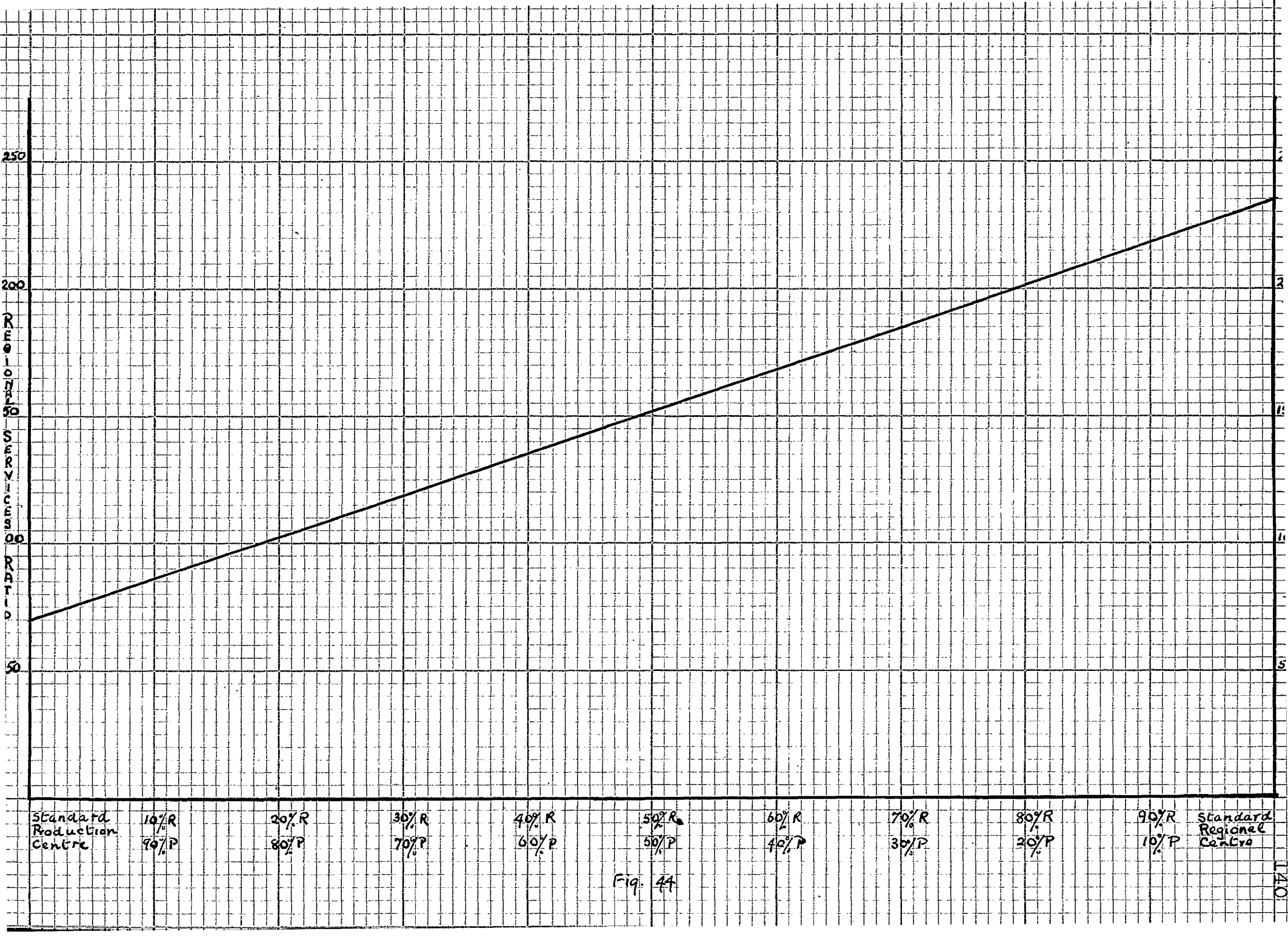

250
200
150
100
50
REGIONAL SERVICES RATIO
Standard Production Centre
10% R 90% P
20% R 80% P
30% R 70% P
40% R 60% P
50% R 50% P
60% R 40% P
70% R 30% P
80% R 20% P
90% R 10% P
Standard Regional Centre

Fig. 44

approximation when no other method is available.

There are some cases in which this method will give a negative answer, i.e. when it is applied to a productive centre in which the number of people employed in the regional services is below the standard - and this is the only interpretation that can be attributed to such an answer.

2c. From the difference between the number of men employed in production and the number of people employed in regional services.

As can be seen from the graphs there is a characteristic difference between the number of men employed in production and the number of people employed in Regional Services, for each proportion in which the two functions are combined. This difference ~~can~~ could also be used to estimate the proportion dependent on each function.

The relation is given by the following equations

$$xP \text{ equals } \frac{(yP - yR) - 185}{3.65}$$

$$xR \text{ equals } \frac{(yR - yP) - 180}{3.65}$$

Since this method is liable to the errors of both previous ones, it is less accurate than either of them and is of no practical use.

3) The use of the standard multipliers on the appropriate groups of workers.

As the following examples show if both multipliers are used in one case the resulting total will be in excess of the actual population, unless there is very heavy unemployment in either of the groups.

In a standard productive centre of 10,000 inhabitants there would be 2,500 men employed in production and 700 people employed in regional services.

2,500	x	4	equals	10,000
700	x	4⅓	"	2,975
Total				12,975

This is an excess of 2,975 people or 29.75%.

In an standard regional centre of 10,000 inhabitants there would be 500 men employed in production and 2,350 people employed in regional services.

500	x	4	equals	2,000
2,350	x	4⅓	"	9,987
Total				11,987

This is an excess of 1,987 people or 19.87%.

Thus unless the number of workers employed in either of these groups has been considerably reduced by unemployment, the use of both multipliers will give a result between 20% and 30% in excess of the actual population.

This excess is not evenly divided between the two components, but varies according to the proportion that each makes of the total.

In the following table the actual proportions and the calculated proportions of the population dependent on the different functions are shown for towns of 10,000 inhabitants in which the two functions are combined in different proportions.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
10,000	2,500	10,000		700	2,975	12,975
9,000	2,300	9,200	1,000	665	3,612	12,812
8,000	2,100	8,400	2,000	1,030	4,335	12,735
7,000	1,900	7,600	3,000	1,195	4,972	12,572
6,000	1,700	6,800	4,000	1,360	5,737	12,537
5,000	1,500	6,000	5,000	1,525	6,375	12,375
4,000	1,300	5,200	6,000	1,690	7,097	12,297
3,000	1,100	4,400	7,000	1,855	7,862	12,262
2,000	900	3,600	8,000	2,020	8,585	12,185
1,000	700	2,800	9,000	2,185	9,222	12,022
0	500	2,000	10,000	2,350	9,987	11,987

(1) Number of people dependent on production.
(2) Number of men employed in production.
(3) -(2) x 4
(4) Number of people dependent on Regional function.
(5) Number of people employed in "Regional Services".
(6) (5) x 4½
(7) (3) plus (6).

From these data two graphs have been constructed showing the appropriate reduction for each component when both of the standard multipliers are used in one case, or when either of them is used in a case other than the standard type to which it is appropriate. (Fig.45).

The following equations give the two relations.

$$xP = 1.25yP - 25 \text{ or } 1.25(yP - 20)$$

when xP is the proportion of the population dependent on production
and yP is tge proportion of the total population obtained by multiplying the number of men employed in productive activities by 4.

$$xR = 1.43yR - 43 \text{ or } 1.43(yR - 30)$$

when xR is the proportion of the population dependent on regional services
and yR is the proportion of the actual population obtained by multiplyibg the number of people engaged in regional services by 4½.

By the use of these equations the employment conditions in any town can be analysed in terms of the standard regional centre and the standard production centre1/

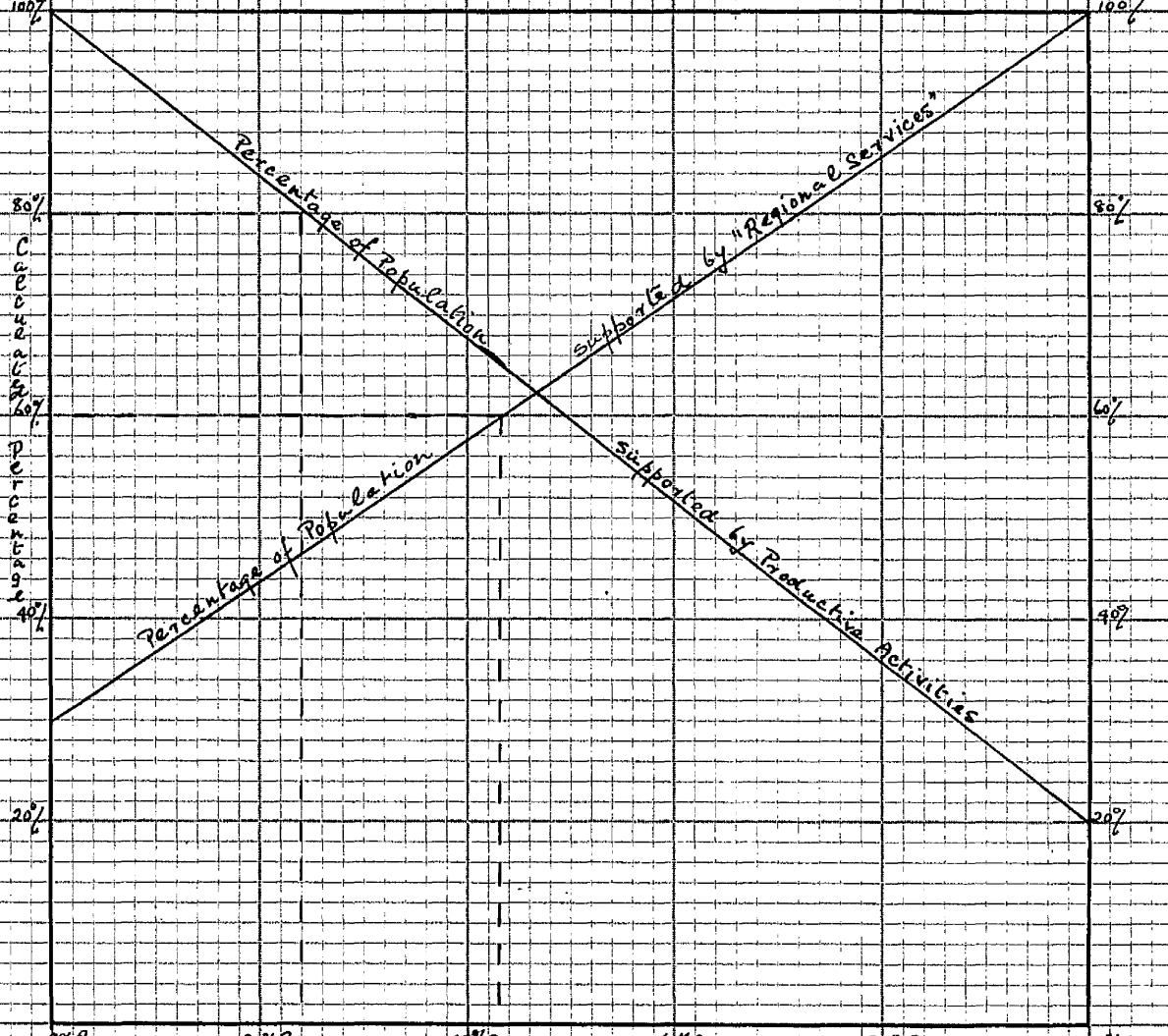

100%
80%
60%
40%
20%
Calculated percentage
Percentage of Population Supported by "Regional Services"
Percentage of Population Supported by Productive Activities
0%R 100%P
20%R 80%P
40%R 60%P
60%R 40%P
80%R 20%P
100%R 0%P
Adjusted Percentage
Towns with fewer than 50,000 inhabitants

Fig. 45.

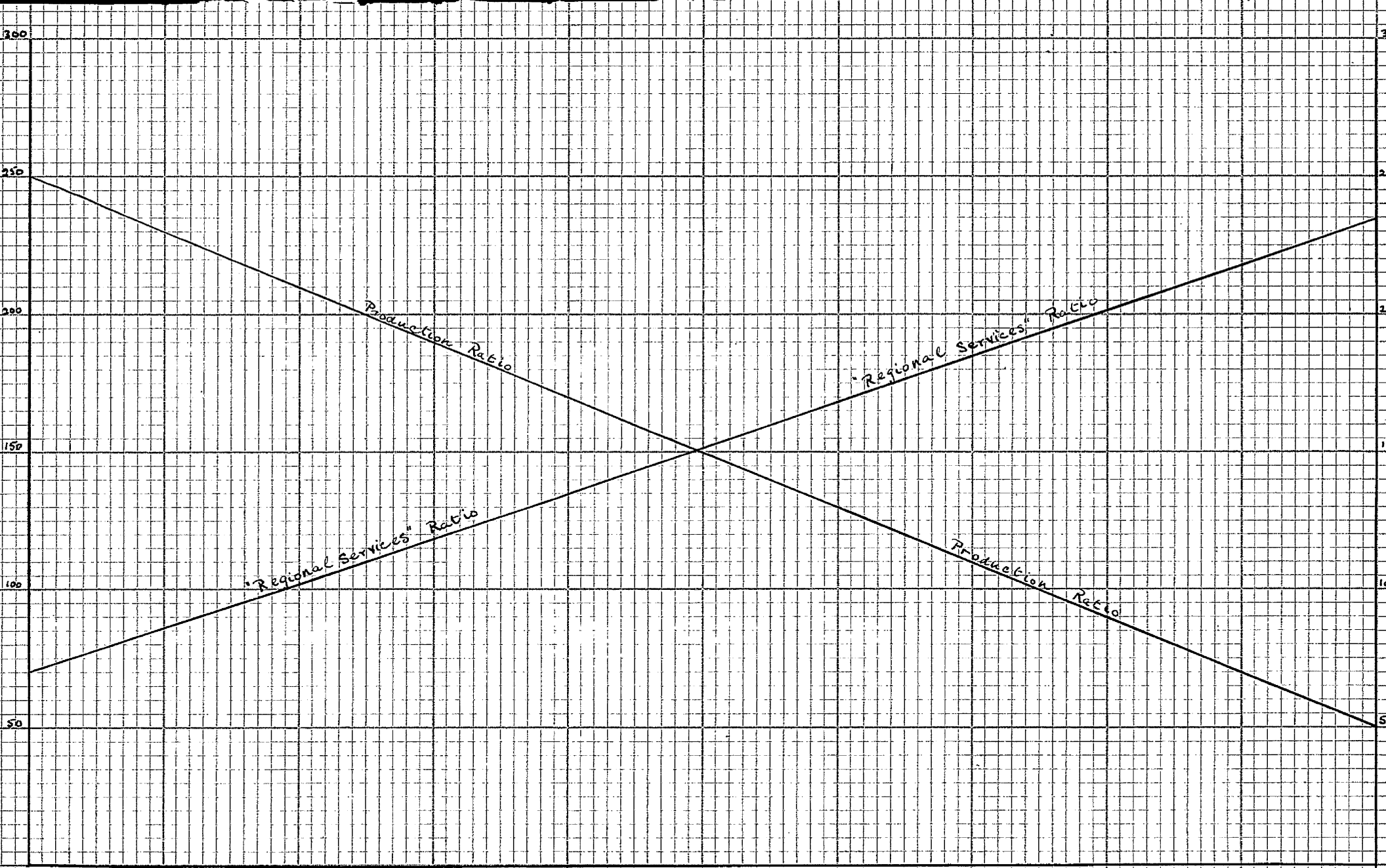
centre. If the two components do not coincide with the total population then an explanation must be sought in variations from the standard conditions, and the nature and extent of these divergences should be investigated.

SUMMARY

Of all the methods outlined above, the simplest one to use and interpret is to compare the ~~proportions~~ ratio per 1,000 inhabitants of men in productive employment and of people employed in "Regional Services" with the standard proportions shown in the diagram (Fig.46).

When each of these proportions is compared separately with the diagram the two results may agree fairly closely, in which case there is a high degree of probable accuracy, or they may disagree considerably and in such cases it is necessary to consider which is likely to be more accurate in the particular case; in relation to the percentage of unemployment among men and the relative importance of the two functions.

It should be especially noticed that all the above methods are devised particularly to analyse the conditions in towns of fewer than 50,000 inhabitants in which the population depends merely on a combination of productive and regional functions. They cannot be expected to apply to other types; to Health Resorts for example, or to Defence Centres and they may be inaccurate in the case of centres providing specialised types of services, such as specialised ports. Consequently it is vital that, before any attempt at analysis is made, the characteristic diagram



Standards Ratios for Towns with fewer than 50,000 inhabitants

Fig 46

diagram should be examined to see whether the town does not depend on a combination of productive and regional functions or whether it is one of the exceptional types.

METHODS FOR TOWNS WITH MORE THAN 50,000 INHABITANTS.

METHODS FOR TOWNS WITH MORE THAN 50,000 INHABITANTS.

In the case of towns with over 50,000 inhabitants the Census classifies the unemployed workers according to the Orders with which they were associated. Consequently it is possible to base all calculations on the number associated with each Order (whether or not they were employed at the time of the Census. This eliminates any variations due merely to different rates of unemployment, and removes one cause of divergence from the standards.

Unfortunately, none of these towns approximate sufficiently closely either to a purely productive centre or to a pure regional centre to give a reliable standard. Standards can however be obtained by making appropriate adjustments to the standards chosen from the examples of the smaller towns. The following are the necessary adjustments:

The standard multiplier to be applied to the number of men, employed and unemployed, associated with productive activities becomes 3.5 instead of 4, and consequently that standard proportion per 1,000 inhabitants is 285 in a standard production centre and 60 in the standard regional centre.

The number of unemployed persons in the country returned as associated with the "Regional Services" (561,444) is/

is 8.5% of the number employed in the same services (6,624,768). If the standard figures for the Regional services are raised correspondingly they become 255 per 1,000 inhabitants in a standard regional centre and 75 per 1,000 inhabitants for a standard production centre. For the sake of convenience, ~~to give~~ a multiplier of exactly four, may be taken. ~~the standard in the former case is taken as 250.~~

The graphs based on these standards are shown in Fig. and this should be used for all towns with over 50,000 inhabitants instead of Fig. 47

The corresponding equations are

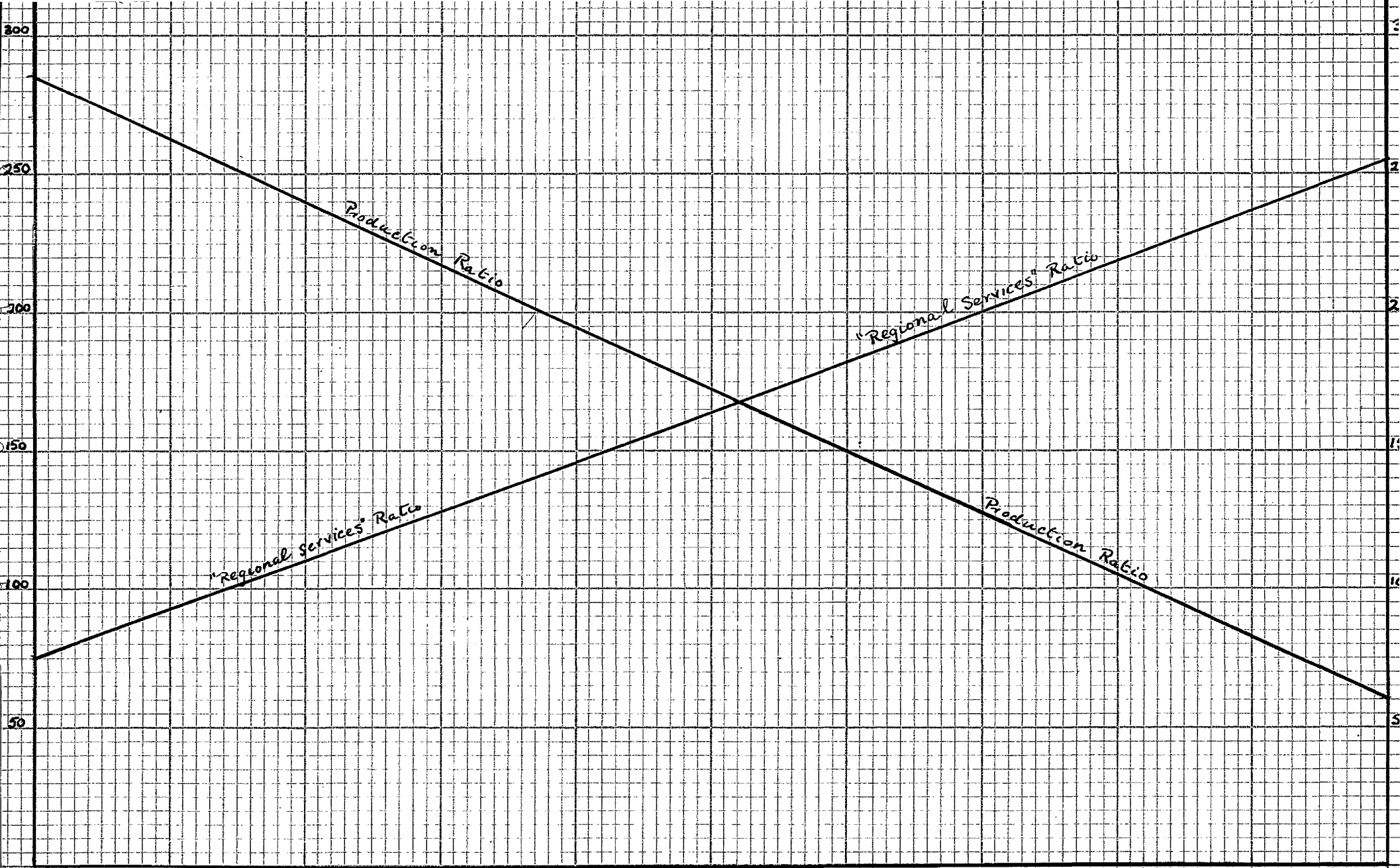
$$xR \text{ equals } \frac{yR - 75}{1.75}$$

$$xP \text{ equals } \frac{yP - 70}{2.15}$$

The following table gives the necessary data for correcting the results obtained by the use of both multipliers for a town of mixed function with over 50,000 inhabitants.

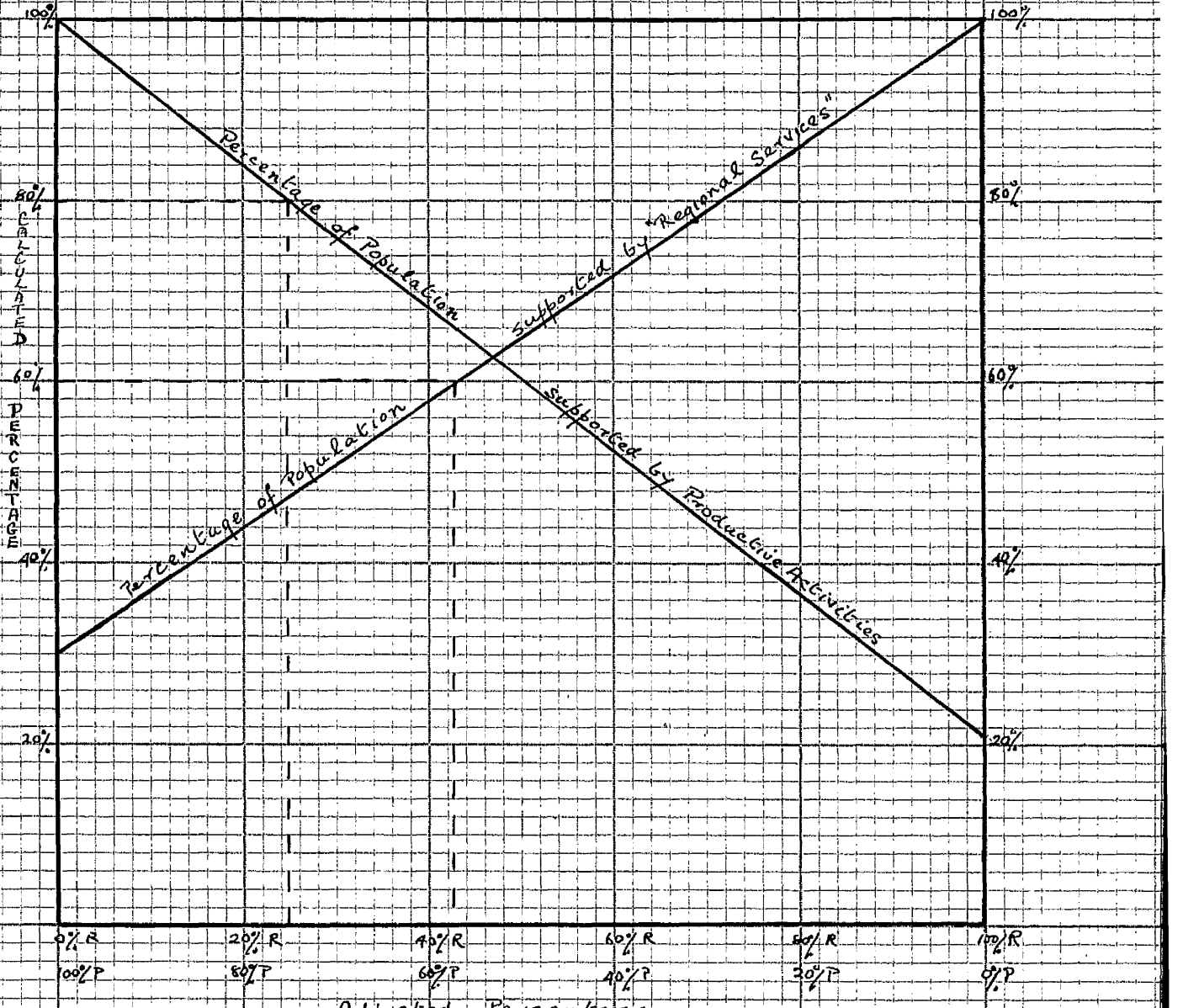
(1)	(2)	(3)	(4)	(5)	(6)	(7)
100,000	28,500	99,750	0	7,500	30,000	129,750
90,000	26,250	91,875	10,000	9,250	37,000	128,875
80,000	24,000	84,000	20,000	11,000	44,000	128,000
70,000	21,750	76,125	30,000	12,750	51,000	127,125
60,000	19,500	68,250	40,000	14,500	58,000	126,250
50,000	17,250	60,375	50,000	16,250	65,000	125,375
40,000	15,000	52,500	60,000	18,000	72,000	124,500
30,000	12,750	44,625	70,000	19,750	79,000	123,625
20,000	10,500	36,750	80,000	21,500	86,000	122,750
10,000	8,250	28,875	90,000	23,250	93,000	121,875
0	6,000	21,000	100,000	25,000	100,000	121,000

(1) Number of people dependent on production.
(2) Number of men associated with production (including unemployed). ~~(2) x 8.5~~
(3) (2) x 3.5.
(4) Number of people dependent on regional functions.
(5) Number of people associated with Regional Services
(6) (5) x 4.
(7) (3) plus (6)



Standard Ratios for Towns with over 50,000 Inhabitants

Fig 44



Towns with over 50,000 inhabitants

Fig. 48.

The corresponding equations are

xP equals $\frac{yP - 21}{0.79}$ or $1.26(yP - 21)$ or $1.26yP - 26.5$

when xP is the proportion of the population dependent on production
and yP is the percentage of the total population obtained by multiplying the number or men associated with production by 3.5.

xR equals $\frac{yR - 30}{0.7}$ or $1.42(yP - 30)$ or $1.42yP - 43.$

when xR equals the percentage of the population dependent on the regional function
and yP is the percentage of the population obtained by multiplying the number of people associated with regional services by 4.

Relation of Actual Conditions to the Selected Standards.

The choice of 70 people employed in the "Regional Services" group per 1,000 inhabitants as the minimum ratio necessary before a town with fewer than 50,000 inhabitants can be considered to have any workers available for regional services for an external area has been checked by an examination of the conditions in the towns in which the ratio is below and slightly above the standard figure.

All the seven towns with ratios below 50 per 1,000 have between 10,000 and 20,000 inhabitants. Five of them are in the Yorkshire and Nottinghamshire coalfield, one in the Black Country and one in South Wales.

	(1)	(2)	(3)	(4)	(5)	(6)
Warsop	10,749	532	49	3,064	285	4.5
Maltby	10,010	417	43	2,651	265	9.2
Conisborough	18,174	880	49	4,992	275	9.3
Thurnscoe	10,548	474	45	2,840	268	9.6
Darton	12,698	629	49	3,349	264	13.1
Darlaston	19,736	971	49	4,432	225	24.7
Glyncorwg	10,203	442	43	2,373	232	29.0

(1) Population
(2) People employed in "Regional Services"
(3) Ratio of (2) per 1,000 inhabitants
(4) Men employed in productive activities
(5) Ratio of (4) per 1,000 inhabitants
(6) Number of unemployed men as of percentage of men in employment.

Except for Glyncorwg and Darlaston where male unemployment was exceptionally severe, the ratio of men employed in production exceeds the standard taken for a productive centre. Consequently the number of men employed in production is sufficient to support the whole population of/

of each of these towns and confirms the view that they have no regional function.

Similarly the ratios of men employed in productive work are consistent with a standard ratio of 250 per 1,000 inhabitants when the male unemployment rate is 15%.

Among the 24 towns with ratios between 50 and 60 the ratio of men employed in production is above standard, even in one town in which there is an unemployment rate of 20%, and the ratios do not diverge more than 10% from the standard unless the unemployment rate is under 7% or over 18%. (See Table 13).

These facts confirm that these towns have no regional function, and also that 250 per 1,000 inhabitants is as satisfactory a standard as can be obtained for men employed in production in a purely productive centre. Even the figure for Hebburn where the ratio is 124 per 1,000 is consistent with a standard of 250, for there the unemployed men were almost as numerous as those at work.

The towns with ratios between 60 and 70 approach the borderline, but are still exclusively dependent on their productive activities. For example in no town with an unemployment rate of less than 17%, is the ratio of men employed in productive activities more than 10% below standard and one town (Ashington) with 14.2% male unemployment has a ratio which exceeds the standard, although there were also 67 people per 1,000 inhabitants engaged in the "Regional"/

"Regional Services" group. This seems the nearest approach to an actual case of a town with a normal unemployment rate, entirely dependent on productive activity, and also with the number of ppople employed in the "Regional Services" group approaching the standard, beyond which there would be an excess over the town's own needs.

With the next group, ratios of 70 - 80, the critical point is evidently past for out of 49 cases there are only three in which the standard ratio for men employed in production is exceeded

	(1)	(2)	(3)
Swadlincote	256	71	9.7
Leyland	255	73	5.6
Tyldesley with Shakerley	251	75	9.4

1) Ratio of men employed in production
2) Ratio of people employed in "Regional Services"
3) Unemployed men as a percentage of unemployed men

It will be seen that all three are in the lower half of the group and each has an unemployment rate considerably below the average.

Thus the actual conditions confirm the standards chosen on a more limited basis; 250 men per 1,000 inhabitants engaged in productive work in a standard productive centre with a male unemployment rate of 15%, and a maximum of 70 people per 1,000 inhabitants employed in "Regional Services" unless the regional function has played some part in the growth of the town.

The tables also reflects the very great variability of/

of the ratio of men employed in Productive activities due to variations of unemployment. The relation of the ratios in all towns to the standards is shown in a later diagram.

Arrangement of Towns in Order of the Relative Importance of the Regional Function.

By the use of the above standards it is possible to calculate or to read from the diagram the proportions of the standard productive type and standard regional type respectively represented by the actual ratios of people employed in "Regional Services" per 1,000 inhabitants in any individual case, to the nearest 1% or to an even greater degree of refinement. But even in the case of the ratio of the people employed in "Regional Services" there is the possibility of a divergence of 6% from the standard. The possible divergence is much higher in the case of the ratio of the number of men employed in production, on account of the great local variation of the rate of male unemployment from the national average. In view of these divergences the former ratio is used and for most purposes it is sufficient to classify the towns into groups according to the nearest even 10% dependent on "Regional Services".as

Arrangement of Towns in Order of the Relative Importance of the Regional Function.

				Relation between the actual ratio and the standard for a production centre
Group	1	3	under 48	More than 15% below the standard
Group	2	35	49 - 61	5% - 15% below the standard
Group	3	74	62 - 78	Within 5% of the standard
				Percentage of population dependent on Regional function
Group	4	86	79 - 95	5% - 15%
Group	5	52	96 - 111	15% - 25%
Group	6	44	112 - 128	25% - 35%
Group	7	39	129 - 144	35% - 45%
Group	8	56	145 - 161	45% - 55%
Group	9	66	162 - 177	55% - 65%
Group	10	52	178 - 194	65% - 75%
Group	11	39	195 - 210	75% - 85%
Group	12	24	211 - 227	85% - 95%
				Relation between the Actual Ratio and the standard for a regional centre
Group	13	13	228 - 243	Within 5% of the standard
Group	14	4	243 - 260	5% - 15% in excess of the standard
Group	15	10	over 260	More than 15% in excess of the standard

(1) Number of Urban Districts in England and Wales with 5,000 - 50,000 inhabitants in the Group.
(2) Ratio of people employed in "Regional Services" per 1,000 inhabitants.

(no.13)

In the table in which the details of the above groups are given the Urban districts are arranged in order of the ratio of people employed in the "Regional Services" group. Apart from anomalous cases it may be presumed that they are also arranged in order of the relative importance of the Regional function. Whilst for some purposes a broad grouping is sufficient in other cases it is necessary to calculate/

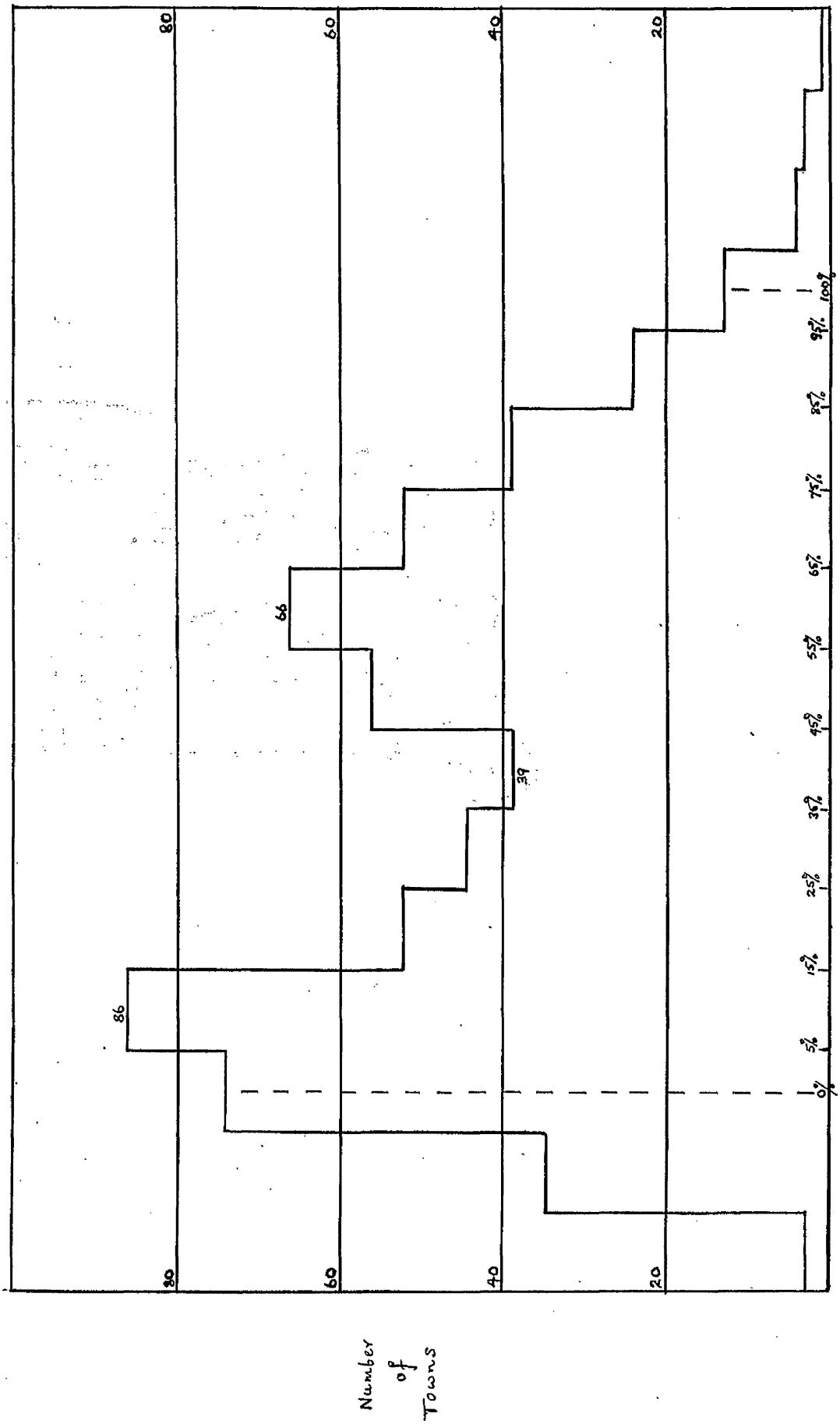
calculate the proportion of the population, or the number of people , dependent on the regional function but wherever such a figure is given it must be understood to have the qualification "plus or minus 6%"

Divergence of Types

The dispersion diagram (fig. 49) may be used to supplement and make more explicit what was said about the divergence of types on pp. 29-30.

It shows that towns approximating to the standard production centre are common; that towns approximating to the standard regional centre are comparatively rare. It also shows that there are many predominantly productive centres in which the regional function supports up to 25% of the population, and that in most regional centres productive activities independent of the regional function have developed to such an extent that they support from 15% to 50% of the population. Ont the other hand intermediate types in which productive activities support 50% to 75% of the population and the regional function supports 25% to 50% are less common. In other words, it is comparatively rare for a town which is by origin a regional ~~function, but in towns in which productive activities~~ centre either to be without significant independent productive activities or for the latter to have developed to such an extent as to predominate over the original function, but in towns in which productive activities are predominant it is comparatively rare for less than 75% of the population

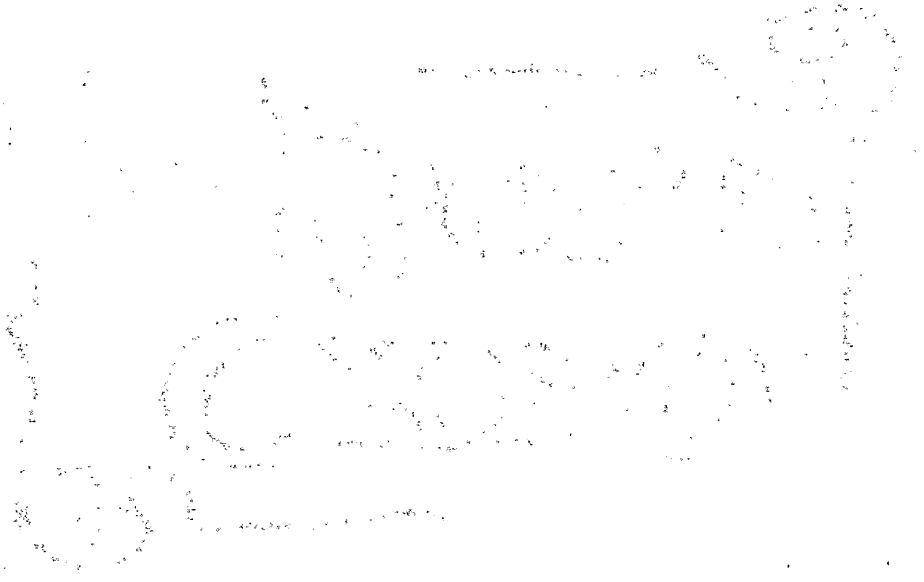
to/



Proportion of Population dependent on Regional Functions.

Fig. 49

to depend on those activities or for more than 25% to be dependent on the provision of regional services.



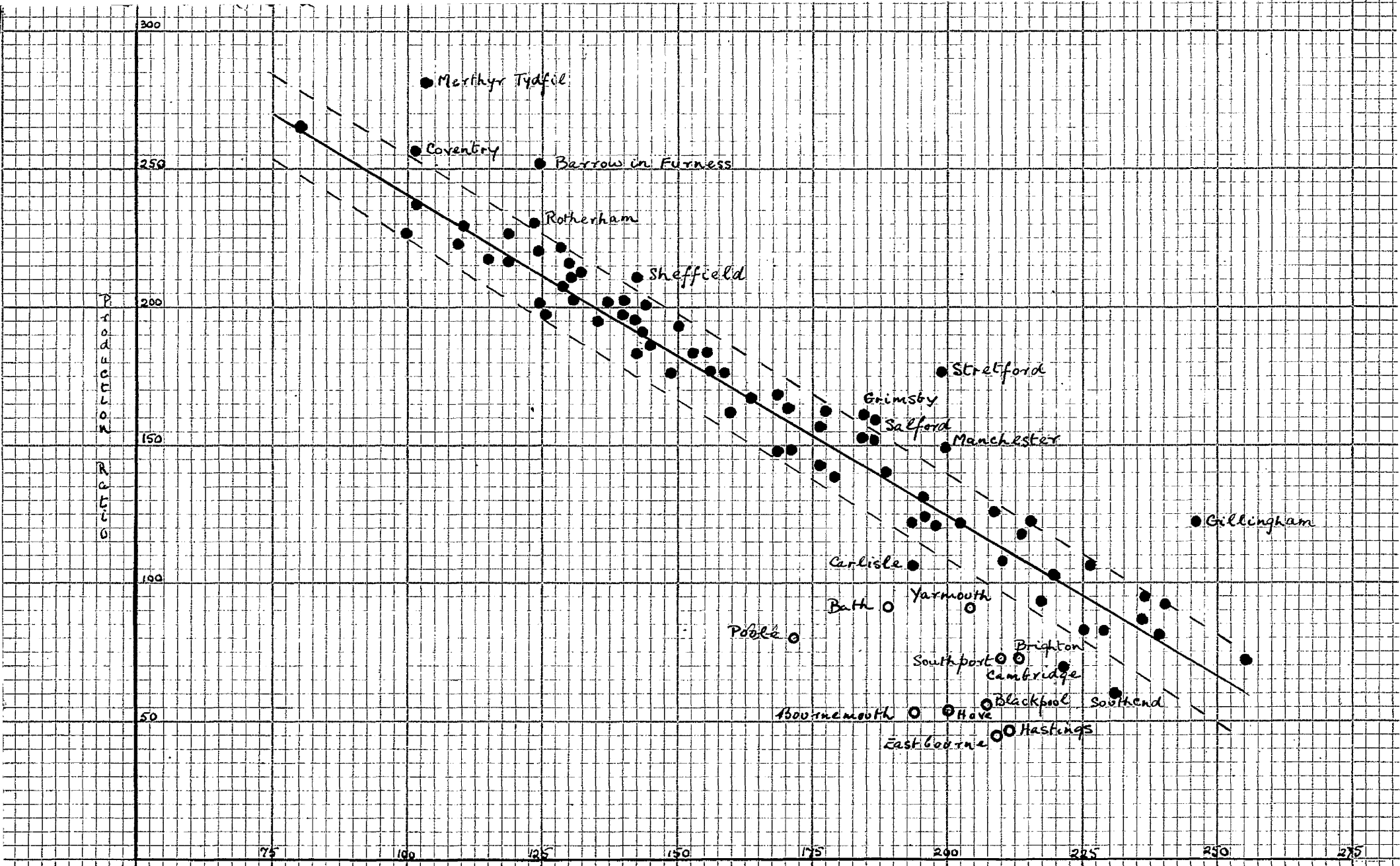
DIVERGENCES FROM THE STANDARDS.

The ratios for the standard production centres and the standard regional centres were chosen after a consideration of the conditions in those towns in which the functions are represented in comparative purity. The number of examples available is small but the standards selected can be checked against the conditions in all other towns and the applicability of the standards and the range of divergence from them investigated.

Towns with over 50,000 inhabitants.

It is best to begin with towns with over 50,000 inhabitants, where the relation of the actual ratios to the standards is not complicated by variations in the rate of unemployment.

Each County Borough and Urban District with over 50,000 inhabitants has been plotted on a diagram (Fig. 50). The vertical co-ordinate in each case represents the ratio of the number of men, employed and unemployed, associated with productive activities to the total population, expressed as the number so associated per 1,000 inhabitants. (Table 14) The horizontal co-ordinate represents the ratio of the number of people, employed and unemployed, associated with the "Regional Services", expressed as the number so associated per 1,000 inhabitants. The straight line on the diagram represents the ratios produced if the standard productive centre and the standard regional centre are combined in various proportions, grading from the standard production centre/



"Regional Services" Ratio

Towns with over 50,000 inhabitants

Fig. 50

centre at the left (Ratios: Production 285, Services 75) to the standard regional centre at the right (Ratios: Production, 60, Services 255)

It will be seen that, except in a few cases, the divergence from the standard line is not important.

Most of the cases in which the divergence is considerable belong to a group of towns, the Holiday and Health Resorts, which were not expected to conform to these standards. They normally have no productive function and although at least some of them act to a limited extent as regional centres for the immediately adjacent areas the problem of determining what part this function has played in their growth is difficult and cannot be solved by the use of the above diagram. The towns of this group shown on the above diagram are:

	(R)	(P)
Poole	172	81
Great Yarmouth	204	91
Bath	188	91
Bournemouth	194	53
Hove	200	53
Blackpool	207	66½
Eastbourne	210	47
Hastings	211	46
Southport	211	74
Brighton	213	60

(R) Ratio of people associated with "Regional Services"
(P) Ratio of men associated with productive activities.

There is another group of towns which need bear no relation to the above line; those in which the defence services play a prominent part. There three such towns in the above diagram:

	(1)	(R)	(P)
Gillingham	31%	246	112
Portsmouth	22.5	228	86
Plymouth	21	236	91

(1) Proportion of workers employed in the Defence services
(R) Ratio of people associated with "Regional Services"
(P) Ratio of men associated with production.

If the Health Resorts and Defence centres are eliminated from the diagram, it will be seen that although the general arrangement of the points plotted corresponds with the line obtained by modification from the standards adopted for the smaller towns, a line based on a standard ratio of 270 men associated with productive activities in a productive centre would be more central, and that almost all towns have production ratios within 15 of those indicated by this line.

Consequently, if the percentages of the population dependent on these two functions ~~is~~ are estimated independently from the appropriate ratios the results will in almost all cases give a total lying between 93% and 107% of the actual population.

There are one or two larger divergences that may be noted; Merthyr Tydfil (103 : 281), Barrow in Furness (124 : 254), Stretford (198 : 176) and Manchester (198 : 150)

It is sufficient at this stage merely to note their existence. It may however be pointed out that in Merthyr Tydfil and Barrow in Furness the productive activities predominate/

predominate and the extra-ordinarily large proportion of people associated with the Regional Services may well have arisen as a result of the large reduction of their population that had taken place in the previous ten years; 11.3% and 10.6% respectively. The number of people associated with the provision of services would not decrease step by step with the decrease of the population but would inevitably lag.

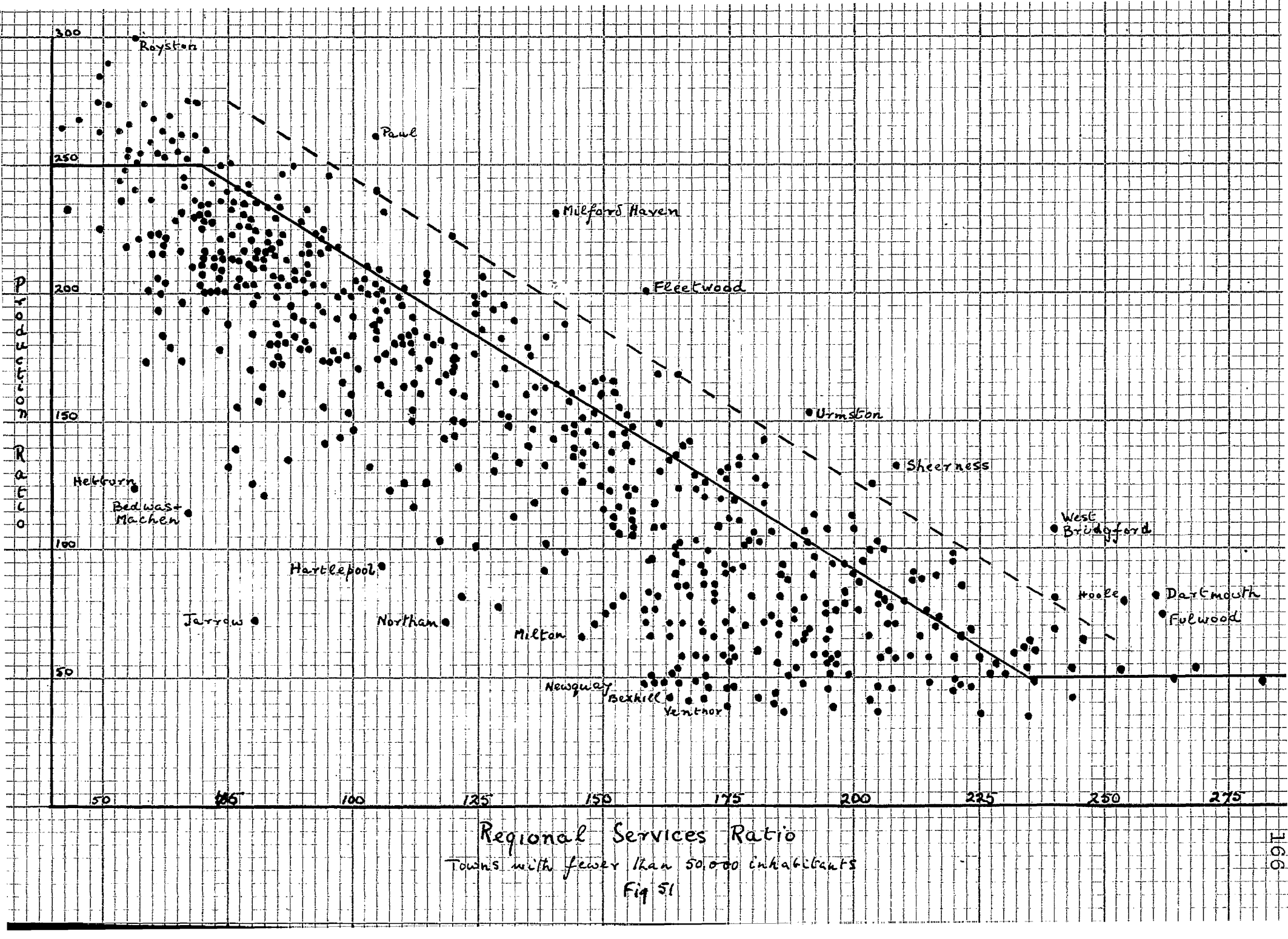
There is no such obvious explanation in the cases of Stretford and Manchester and these divergences are all the more unexpected because no similar feature is shown by Salford (186 : 160) or by any of the other larger provincial centres such as Liverpool (236 : 87), Birmingham (143 : 190) or Leeds (163 : 168).

Towns with 5,000 to 50,000 Inhabitants.

(Fig.51)

As can be seen from the diagram on which each of the smaller towns is plotted with the appropriate co-ordinates there is more divergence from the standards among the smaller towns than among the larger ones already considered.

The preponderance of divergences below the standard is of course due to the relatively high unemployment rates in many of the towns. The largest divergences, in the left half of the diagram, are entirely due to this factor. Jarrow (80 : 72) which shows the largest divergence also had the highest rate of male unemployment, 128%, i.e. the number of men unemployed was 28% larger than the number in



Regional Services Ratio

Towns with fewer than 50,000 inhabitants

Fig 51

employment. Hebburn (56 : 124), Bedwas and Machen (67 : 114) and Hartleppol (106 : 93) also show divergences of this type associated with unemployment rates of 92%, 97%, and 77.2% respectively.

The numerous Health and Holiday resorts, which will be studied separately in a later section, and the Defence centres previously listed, al o diverge to a considerable extent from the standard line.

To eliminate those cases which could not be expected to approximate to the standard another diagram (Fig. 52) has been drawn from which Holiday and Health resorts, Defence centres and all towns in which the unemployment rate was over 20% have been omitted. The remainder still show a wider range of scattering than the larger towns in which the inclusion of the unemployed avoided divergences due to variations in the unemployment rate. Three points may be noted:

1) that the standard line is centrally placed with the range of scatter,

2) that few towns lie beyond the line which represents the standard for towns without unemployment,

3) that in most cases the deficiency of the ratio of men employed in productive activities from the standard does not exceed 35.

Among the more extreme divergences are the three specialised fishing ports: Paul (104 : 261), Milford Haven (140 : 232) and Fleetwood (158 : 201). In these towns the number/

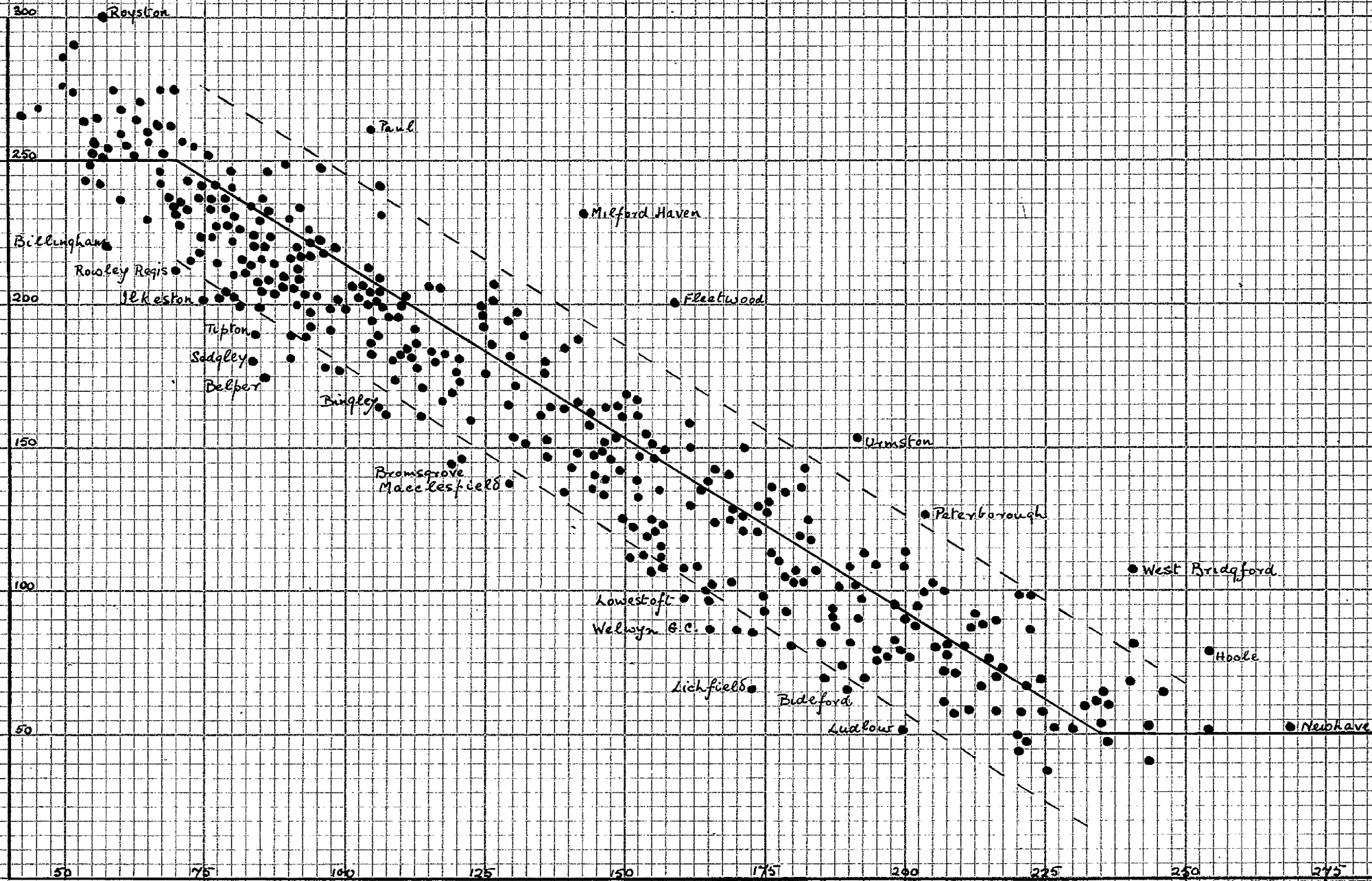

300
250
200
150
100
50
Production Ratio
Royston
Paul
Milford Haven
Billingham
Rowley Regis
Ilkeston
Fleetwood
Tipton
Sedgley
Belper
Burnley
Urmston
Bromsgrove
Macclesfield
Peterborough
West Bridgford
Lowestoft
Welwyn G.C.
Hoole
Lichfield
Bideford
Ludlow
Newhaven
50
75
100
125
150
175
200
225
250
275
"Regional Services" Ratio

Fig. 52

number of people employed in the "Regional Services" group is excessive in relation to the number of productive workers.

The following twelve towns also appear above the line representing the standard for towns without any unemployment:

A) Predominantly Productive Centres.

	(R)	(P)	(U)
Royston	56	300	4.5
Kirkby in Ashfield	95	246	6.3
Normanton	105	240	8.8
Irlam	106	231	4.1
Chepping Wycombe	119	222	6.2

All the above towns have relatively low unemployment rates, and some divergences above the standard line are to be expected among such cases.

b) Predominantly Regional Centres.

	(R)	(P)	(U)
Rugby	161	169	8.3
Eastleigh and Bishopstoke	165	169	5.2
Urmston	191	154	7.3
Peterborough	203	127	11.2
West Bridgford	240	109	4.6
Colchester	240	81	814
Hoole	254	80	11.6

The above towns not only have relatively low unemployment rates, but in each of them except Urmston the "Regional Services" ratio is inflated by some specialised service#; railway workers in Eastleigh, Peterborough and Hoole, and a large garrison in Colchester whilst West Bridgford has a larger proportion of workers employed in commerce and finance than any of the other urban districts.

The ratio of men employed in production is deficient

in relation to the number of people employed in regional services by more than 40 in only two towns, inboth of which the male unemployment rate was relatively high.

	(R)	(P)	(U)
Sedgley	83	180	17.4
Belper	85	174	13.8

With the standards chosen thus verified against the actual conditions it is possible to apply those standards to the estimation of the relative importance of the different towns in the country as regional centres for the surrounding areas. First, however, the character and distribution of the other types of towns will be investigated.

THE DISTRIBUTION OF TOWNS.

Before going on to consider the detailed distribution of the towns of the various regions of Britain it is advisable to consider the factors that underlie the present distribution and the existence of various specialized towns.

Under a system of self sufficient economy there is no need or opportunity for the growth of large towns. The bulk of a population living under such conditions will be scattered more or less evenly over the country in accordance with the varying productivity of the soil, perhaps nucleated into villages at small intervals. To provide for the needs of such an agricultural community there will be a variety of craftsmen in the villages and small towns. In each some representatives of all the crafts and trades; blacksmiths, carpenters, saddlers, wheelwrights, masons, brewers, and bakers, to provide the houses, tools, food and clothing of the local people.

Even in comparatively simple communities, there are usually a few market towns, larger than the usual villages, where produce from wider areas is collected and from which products not available locally, or manufactures for which there is only a small demand in the individual villages are distributed. Under European conditions the larger market towns also provide the administrative/

administrative and legal services, and at the summit of the scale there is a metropolis, the chief market and administrative centre.

Such an arrangement is outlined in its theoretical simplicity in the report of the Census of 1851.

"Hamlet, village, town, borough, city, county town and metropolis are names applied to aggregations of dwellings in immediate contiguity or near proximity. The town - a generic name which.....may serve to designate them all - is often subdivided into wards or parishes; while the smaller towns are almost invariably in the midst of a rural population, with which they are intimately associated.

Two general laws appear to operate very constantly: the one tending to equable diffusion of the population, the other tending to its condensation round

(1) centres at which men, women, and children can assemble weekly (villages).
(2) In conformity with the same laws there is an arrangement of villages around other centres, at which the men can meet weekly and return home in a day (market towns);
(3) of these centres again separated by wider intervals, around other centres, where the heads of the chief families convenially congregate periodically (county-towns); and finally of the large towns round the capital, which would naturally find its place in the centre of the kingdom, and is only drawn from it by commercial exigencies, and the necessity of communication with the cities of other states." (1)

The report adds that there is no definition of the terms 'village' or 'hamlet' but

"the number of places which have defined boundaries and are separately returned in the population tables is 17,150; and if it is assumed that to each of these there is a village - an aggregation of families round a church or chapel - it will follow that the villages.....are..... on an average about 2½ miles apart; so that the inhabitants of/

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(1) Census of Great Britain, 1851. Numbers of the Inhabitants. Vol. 1. page xlv.

of the country around them - distributed over an area of five (square) miles - lie at the average limit 1½ miles from the centre, or at the mean distance of six-sevenths of a mile." (2)

The list of towns included in addition to Parliamentary Cities and Boroughs, and Municipal Boroughs, towns without charters of incorporation if they had more than 2,000 inhabitants.

"The Clerks of the Peace of the respective counties have been consulted as to the places which are entitled to be deemed towns and several places containing more than 2,000 inhabitants are omitted, because in the opinion of those officers, they could not in strictness be so designated."

The population of such unincorporated towns are given

"on the authority of the local Registrars of Births and Deaths whose opinions upon the limits proper to be taken have been arrived at after conference with their Superintendent Registrars." (3)

On the basis of such information the Report announced the conclusion that

"Great Britain has 815 towns of various magnitudes, either market towns or county-towns or cities; 580 in England and Wales, 225 in Scotland and 10 in the Channel Islands."

It then proceeds to calculate that

"to 21 of the preceding 'villages' there is on an average a town, which stands in the midst of 110 square miles of country, equivalent to a square of nearly six miles; so that the population of the country around is on the average about four miles from the centre." (4)

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(2) Op. cit. page, xlv.
(3) Op. cit. page, xxii.
(4) Op. cit. page, xlvi.

The population amounted to 10,656,228 in the 815 towns, and the average 12,953 inhabitants per town. The density of the population outside the towns, (which was almost equal in numbers, 10,403,189) was 120 per square mile.

Obviously such averages were much farther from reality in the case of Scotland, with its violent contrasts between Highland and Lowland, than in England and Wales, especially the south-eastern lowlands of England. The averages are worked out for England and Wales in more detail.

"A simpler notion of the average distribution of the population of England (and Wales) is obtained by conceiving the area of 58,320 square miles divided into 583 squares, each containing 25 figures of four square miles; a market town in the central square, containing 15,501 inhabitants, and the 24 squares arranged symmetrically around it in villages containing churches, chapels and houses holding in the aggregate 16,000 inhabitants. Now imagine the figures to be of every variety of form as well as size and a clear idea is obtained of the way that theground of the inland has been taken up, and is occupied by the population.

These 815 towns are grouped around 67 county towns, 52 in England (and Wales), 32 in Scotland and three chief towns, equivalent to county towns in the Islands of the British Seas. Thus each county town is surrounded on an average area of 1,067 square miles, equivalent to a circle 18 miles radius." (5)

In some counties there was no defined county town, but the assizes were held alternately in two or more considerable towns, and the combined population of these towns, was taken for the purpose of framing the table.

For/

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(5) Op. cit. page, xlvi.

For example the combined populations of Croydon, Guildford and Kingston on Thames were taken for the county town of Surrey. Even with such combinations the average population of the county towns in 1851 was only 20,705, very little larger than the average for all towns, and in fact the change to an industrial system had already brought into existence a class of towns which did not fit into this urban heirarchy. As the Census report expresses it

"Of the general system of towns which pervade every county, a certain proportion has acquired an adventitious but extraordinary importance and magnitude, they have been nurtured and sustained by special circumstances, and for special purposes and are either places of public resort, as watering places, or ports, or the seats of mining and manufacturing enterprise.....Towns of this class are, considered only in their local relations, naturally towns of an inferior order, and even in advanced periods of British History several of them were villages or small market towns, but with the progress of industry, the extension of commerce, the increase of wealth and the aggrandisement of the empire, they have grown and have almost acquired a metropolitan character, so much do they exceed departmental towns in population, extent, riches and social activity.

At the head of the whole heirarchy stands London - the Metropolis - which besides the churches and chapels of the villages, the markets of the towns, the courts of justice of the county-towns comprises the commerce of a great seaport, the manufactures of many towns - the emporium of the empire - the palace of the sovreign - the seat of government, of the legislature, of the central courts, of the heads of commerce, of the learned professions, of literature and of science." (6)

The result of the continuance of the processes here outlined has been practically to eliminate the craftsmen from/

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(6) Op. Cit. page, xlvii.

from the villages, as their markets have been captured by products made by large scale methods in the factories of the industrial towns.

The relation between Urban and Rural population.

Great Britain in 1801 was an agricultural country with a comparatively small development of industry and the proportion of urban to rural population may be taken as typical of the needs of an agricultural community. Only 22% of the population was in towns of over 10,000 inhabitants, even of these, the 9% resident in London could not all have been needed merely to serve the agricultural community. If, however, we take this proportion as the maximum necessary to serve a rural population, and it is probable that the necessary proportion has not increased with improvements in transport and consequent centralisation, then the number of people in towns of over 10,000 necessary to serve the agricultural population of 1931, would be under three and a half millions, and the remaining twenty eight and a half million people in such towns are directly dependent on industry and the commerce which supports it.

I. Towns Specialised on Primary Production.

GROUP 1.

In group 1 the most important, and at the same time the most widely dispersed and least urban, industry is agriculture. The second most important constituent of this group is mining, which in its essential conditions and its relation to urbanisation is very similar to agriculture, although the features are shown on a different scale. Finally the fishing industry offers an excellent example of the advantages of the method of investigating the proportions of industries in towns, over the more normal method of considering the distribution of individual industries.

Mining and agriculture, especially the latter, are two industries which impose strict limits on the degree of concentration which is convenient for the population dependent on them. The work of farming or of coal mining is not a carried on at a site but dispersed over an area, the area of the farmlands and of the workable coal seams respectively. Even if there are nucleated settlements associated with those industries they occupy a small space in comparision to the area over which the workers spread. In both cases there is a limit to the number of people who can, or need by, employed per acre, and there is also a limit to the distance which it is convenient for them to travel to work. Consequently there is a limit/

limit to the number of people engaged in such activities who are likely to concentrate in one settlement, and hence to the maximum population of a town solely dependent on them.

Agricultural Settlements.

The distribution of the population dependent on productive activities is closely related to the size of the working units. The number of people employed on a farm is small. Consequently, where dispersion is at a maximum, the population is evenly distributed over the countryside in small groups, in farmhouses, with or without associated labourer's cottages. Even where nucleation is most developed, the limiting factors on the number of workers in, and hence the population of, a village, are the number of people employed per square mile and the average radius of the land worked from the village.

In 1931 there were 959,453 men associated with agriculture in England and Wales; 905,181 employed and 54,362 out of work, so that the average rate of male unemployment was only 6%. The number of women associated with the Order was 58,116, only 6.1% of the number of men. There was an average of 16.5 male agricultural workers per square mile and the rates for the different counties varied from 6 per square mile in Brecknock to 45 per square mile in Middlesex. As can be seen from the map

Fig. 53.
~~on the opposite page,~~ the counties with fewer than 10 agricultural workers per square mile were the Welsh upland counties of Brecknock, Merioneth, Montgomery and Radnor, and the three northern counties of England; Cumberland, Northumberland and Westmoreland. There were over 20 workers per square mile in Lancashire and Cheshire, in Worcestershire and in the counties east of a line from the Wash to Southampton Water. There were over 30 workers per square mile in the Fenland counties of Holland (Lincs,) and the Isle of Ely, and in Greater London.

The specialised agricultural settlements must be considered in relation to this general distribution of the agricultural workers. An Urban district of four square miles[1] might be expected to have between 50 and 150 male agricultural workers; sufficient to support only 200 to 600 people. A large number of workers can only be found in a Urban district where agriculture is abnormally intensive, or where the residents cultivate an unusually large area of land, which may be inside or partly outside the limits of the administrative district, or where both these conditions are combined.

The Urban district with the largest proportion of its workers employed in agriculture was Holbeach (6,100) in the Holland Division of Lincolnshire. There were 1,274 men and 211 women employed in agriculture and these

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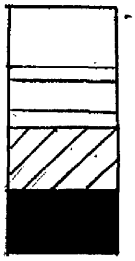
(1) The 1,120 Urban Districts in England and Wales extended over 3,669,966 acres and had an average area of 5.2 square miles.

Number of Agricultural Workers

Per Square Mile



Under 10 per sq. ml

10 - 20 per sq.m.

20 - 30 per sq. m.

Over 30 per sq. m.

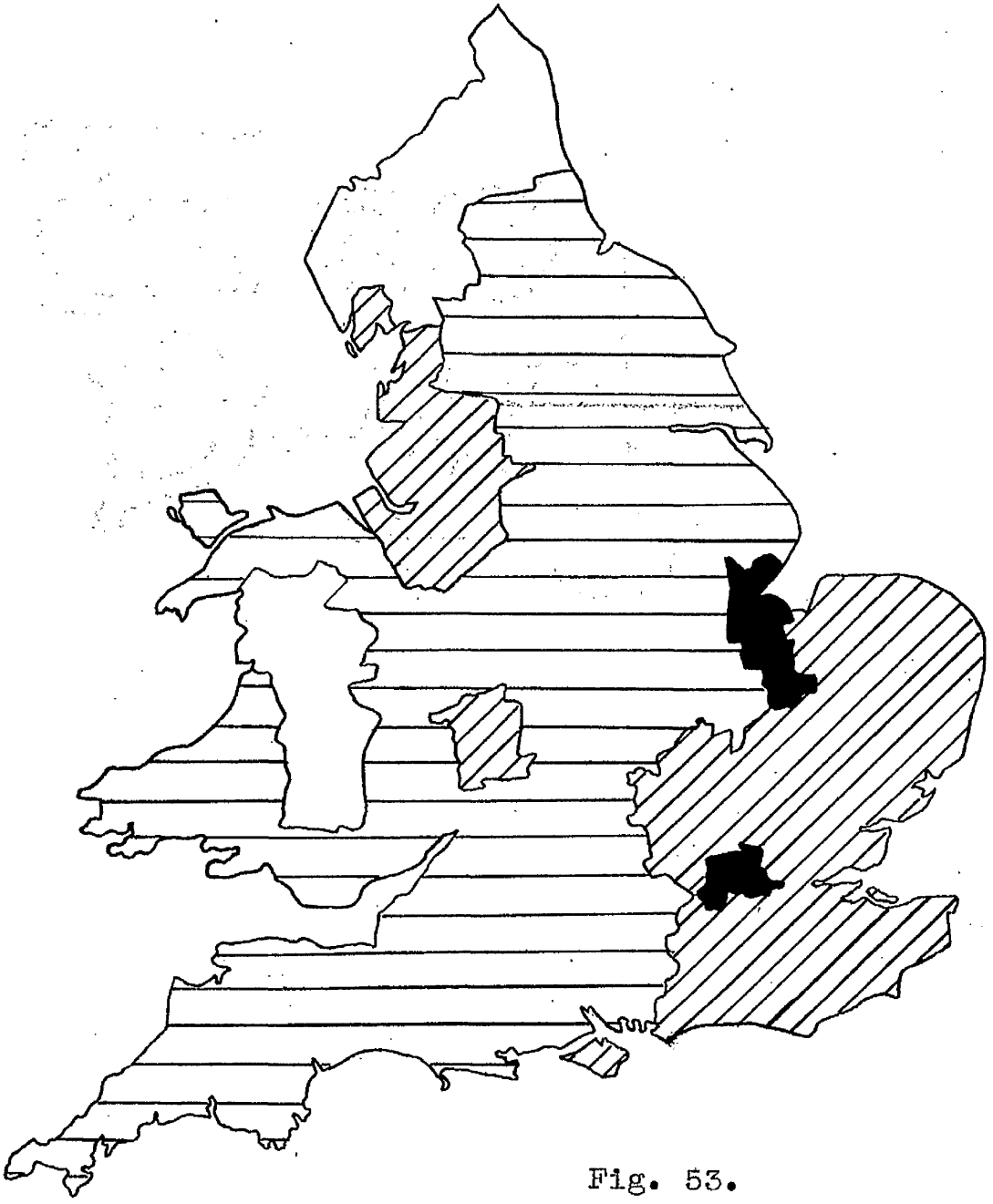


Fig. 53.

1,485 people made up 58% of the workers in the Urban District. The exceptional number of women associated with agriculture is explained by the fact that there is more scope for the employment of women in the intensive cultivation of fruit, vegetables and flowers, especially in glasshouses, than there is in ordinary farming.

The relation between the diagram for Holbeach and that for a purely agricultural settlement is shown below.

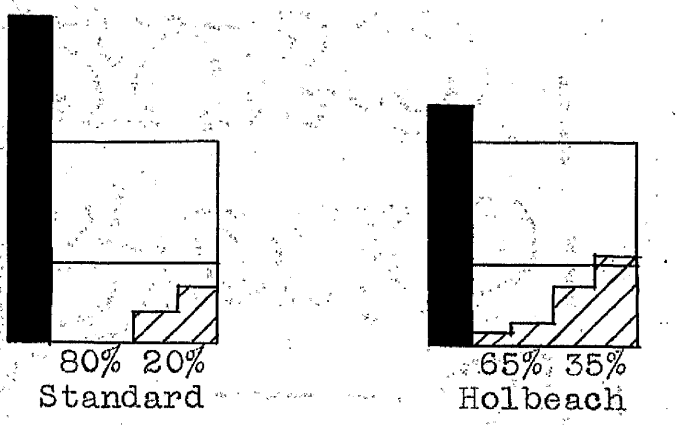


Fig.54.

The divergence from the theoretical type is due to the fact that in earlier times the agricultural settlements of this country were almost self-supporting units with craftsmen and shopkeepers as well as agricultural workers. Although village craftsmen have been subjected to increasing competition from outside it remains true that there is still usually a variety of activity in even small villages.

There were 1,433 men employed in production, (233 per 1,000 inhabitants) and 566 people employed in "Regional Services" (91 per 1,000 inhabitants). The male unemployment rate was 5.5%. The "Regional Services" ratio

is consistent with 13% of the population being dependent on regional functions. The production ratio is consistent with 91% of the population being dependent on productive activities, but in view of the low unemployment rate there is justification for reducing the estimate to 87%. Thus some 800 of the inhabitants depended on regional functions and 5,300 on productive activities. The number of men employed in agriculture (1,274) was sufficient to support 5,100 people, and the only other outstanding productive activity, concerned with the manufacture of foodstuffs, employed 55 men, sufficient to support a further 200 people. It may be concluded that some 84% of the population of Holbeach Urban District was dependent on agricultural activities.

Although Holbeach is comparatively close to the standard type, specialised agricultural centres are rare. Of the Urban Districts with over 5,000 inhabitants only 13 had over 10% of their workers employed in this Order, and of these only 3 had over 50% of their workers so employed. Their distribution is shown on the previous map.

In the Lea Valley, beyond the limit of Greater London, Hoddesdon had 16% of its workers engaged in agriculture, Ormskirk the centre of the west Lancashire plain had 17.3%, Evesham, on the banks of the Avon in a renowned fruit ~~growi~~ growing and market-gardening district, 23.4% and Biggleswade in the Bedfordshire market-gardening district 24%.

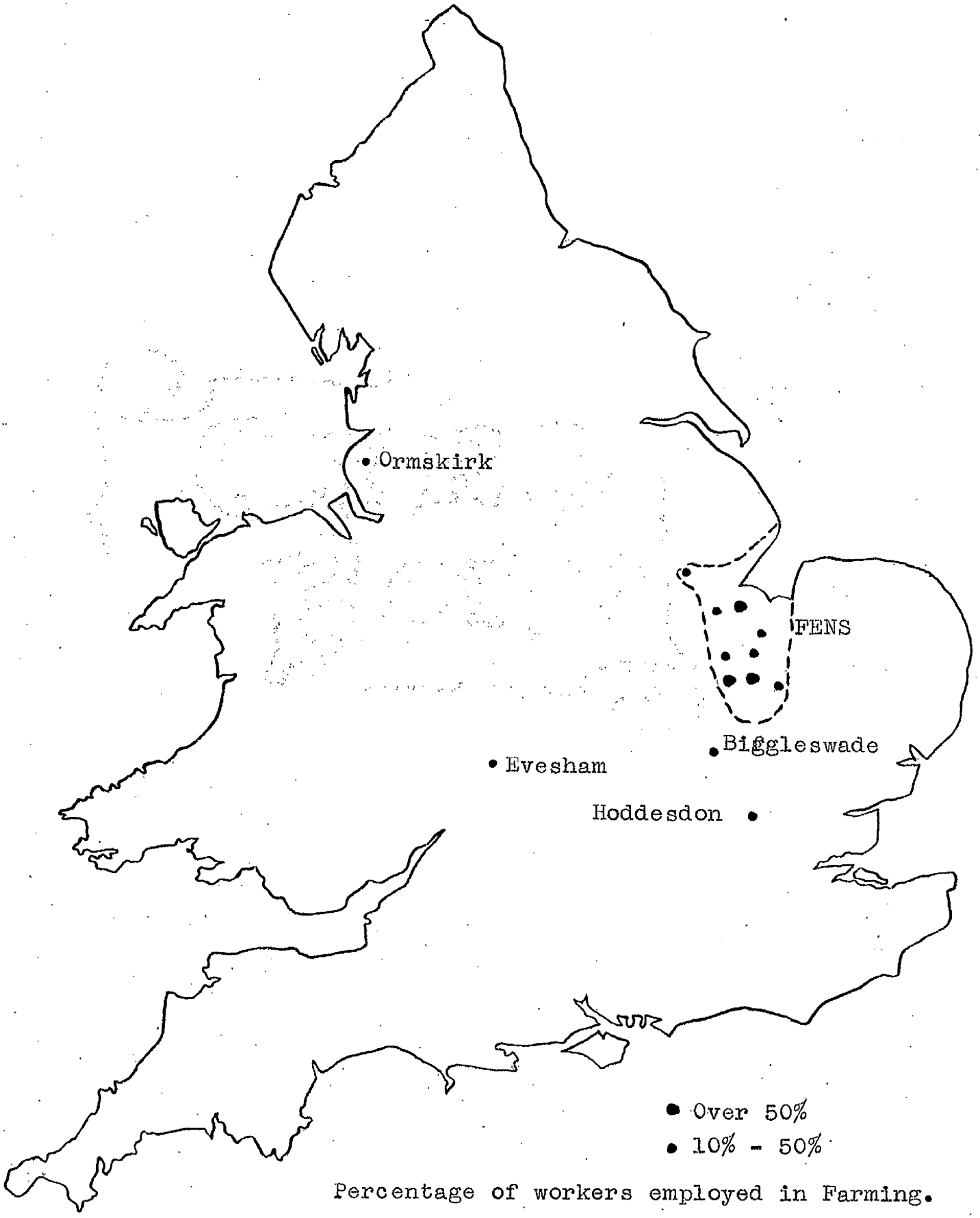
Most of the examples and the most extreme cases are in the Fens and most of them are exceptionally extensive Urban Districts. Sleaford had 10.8% of its workers engaged in agriculture, Wisbech 19%, March 20%, Ely 22%, Spalding 31%, Whittlesey 37%, and the three Urban Districts with over 50% of their workers employed in agriculture were Chatteris, 51%, Ramsey, 52% and Holbeach, 58%.

In the following list the towns are arranged in order of the number of men employed per square mile.

		(1)	(2)	(3)	(4)
W	Whittlesey	8,300	1,083	40.9	26.5
	March	11,300	843	30.9	27.0
	Ely	8,400	736	26.2	28.1
	Sleaford	7,000	241	7.1	33.9
	Holbeach	6,100	1,274	35.4	36.0
	Ramsey	5,200	987	26.5	37.3
	Chatteris	5,100	908	21.5	42.0
	Ormskirk	17,100	1,123	24.4	45.5
	Spalding	12,600	1,143	16.8	68.0
	Biggleswade	5,800	540	7.2	74.5
	Wisbech	12,000	813	10.1	81.0
	Hoddesdon	6,800	416	2.5	169.0
	Evesham	8,800	866	3.5	245.0

(1) Population. (2) Number of men employed in agriculture.
(3) Area in square miles.
(4) Number of men employed in agriculture per square mile.

It will be seen that of the first seven Urban Districts, all of them in the Fens, all, except Sleaford, are over 20 square miles in extent, but that the number of workers per square mile is not significantly in excess of the county averages. In some cases, as at Ely, Ramsey and Chatteris, the bulk of the population is concentrated in the central settlement, in others, as at Holbeach, it is more widely dispersed. The peculiar topographical conditions of the Fens have favoured the nucleation of agricultural settlement



Percentage of workers employed in Farming.

Fig.55,

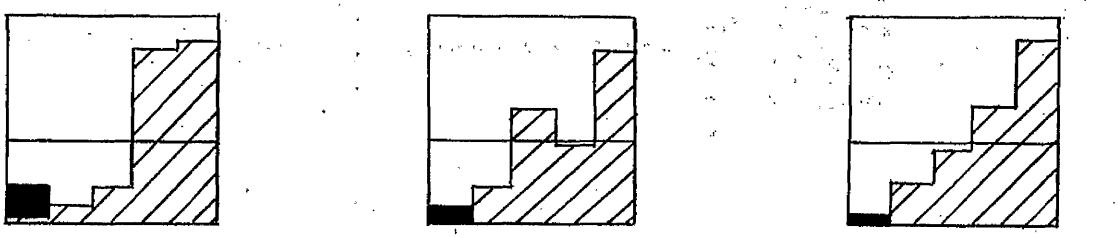
to an exceptional degree, even to the extent of encouraging the concentration of most ofthe farm workers of extensive "Urban" districts into central settlements. If Whittlesey were centrally situated in its district the margins would be just over 3½ miles from the centre.

Ormskirk also owes its large number of agricultural workers more to the extent of the district than to the intensity of cultivation, but in Spalding and Wisbech the two factors evidently work together. The last three remaining Urban Districts are much more limited in extent. The Biggleswade Urban District is equivalent to a circle of 1½ mile radius, so that the large number of workers per square mile may be partly due to the cultivation of land outside the Urban District, as well as to the intensity of cultivation with it. In the case of Evesham where the Urban District corresponds to a circle of only 1 mile radius, it is clear that Evesham town is a centre from which the land is cultivated considerably beyond the limits of the Urban District.

The largest of these towns, Ormskirk, has only 17,100 inhabitants, and the largest number of male agricultural workers in any of these Urban Districts is 1,274 in Holbeach. Thus the number of people required to cultivate t the land within easy reach of any one centre, even by the most intensive methods, is insignificant in relation to the total number of workers in all except small towns.

Among the towns with 20,000 - 50,000 inhabitants the largest proportion of workers employed in this Order was 7.1% in Worthing. The conditions there were similar to those in some of the smaller towns listed above; 1,287 men were employed in an area of 11.3 square miles; 114 per square mile.

Among the large towns the highest proportion was 2.6% at Reading (97,000) where 1,115 men were associated with agriculture in an area of 14 square miles; 79 per square mile. Of these men only 21% were concerned with general farming and 59% were employed in the production of flowers and seeds and in nurseries.



Worthing Reading Greater London

Fig. 56

The intensification of cultivation adjacent to a large town is well illustrated by the figures for Greater London. There were 28,791 men associated with this Order in an area of691 square miles, an average of 41.7 per square mile; a figure not exceeded by any county outside Greater London. The nature of the intensification is shown by an analysis of the different types of agricultural employment. Only 25.5% of the men were employed in general farming, 38.5%

were engaged in flower and seed growing and in nurseries, 10.8% in market-gardening and fruit farming and 23% in undefined forms of gardening. The increased intensity of cultivation is morethan sufficient to compensate, as far as the need for labour is concerned, for the sterilisation of the built up area. This is true even of the County of London which has 35.4 agricultural workers per square mile, a number exceeded only by Middlesex and the Holland Division of Lincolnshire. In the County of London, however, 46% of these workers are gardeners and 29% are engaged in the production of flowers and seeds and in nurseries. In spite of the relatively large number employed per square mile, and the very considerable total, the agricultural workers make up only 0.8% of the total number of workers in Greater London.

We find therefore, as we should expect, that there is no example of a large town that depends to any significant extent directly on agriculture and the few small towns listed as examples of extra-ordinary specialisation are the only exceptions to the generalisation that the percentage of workers engaged in agriculture tends to be in inverse proportion to the size ofthe town and is usually very small.

~~XXXXXXXXXXXX~~

2) Mining Towns.

Coal-mining provides an almost exact parallel to farming and is quite distinct in its effect on population distribution from the manufacturing industries. The area of possible production is not so extensive as that available for farming since it is restricted to the area of the workable coal seams. On the other hand mining production cannot be unduly concentrated but must be spread over the coalfields, and the potential intensity of mining is limited by the thickness and number of the seams within workable depth. The number of people employed per square mile is much higher than in farming; in the Northumberland and Durham coalfield the average is 150 per square mile (232,000 men on 1,550 square miles), on the Yorkshire, Nottinghamshire and Derbyshire Coalfield it is 200 per square mile (345,000 men on 1,790 square miles) and on the South Wales coalfield 300 per square mile (221,000 men on 690 square miles). The unit of production is also much larger than in the case of farming, but there is, nevertheless, a limit to the number of miners who can conveniently live in one centre although it is about 12,500 compared with less than 2,000 for a farming community.

Unless there are specific reasons against it, the pits are likely to be spread evenly over the coalfield since each must have its exclusive working area. The typical

form of associated settlement is a nucleated group near the pithead, and the sizes of these individual groups are closely related to the employment capacity of the neighbouring pits, especially where the houses are owned by the colliery company. The groups range in size from "miners' rows" to the specially erected villages and small towns associated with the large modern collieries in Nottinghamshire, Yorkshire and Durham, of which the largest, Horden Colliery in Durham, employed 4,246 men in 1931.

Thurnscoe, in the West Riding, has a higher proportion of its workers employed in mining than any other Urban District and since it has a population of 10,500 and extends over less than 2 square miles it is a particularly good example of a moderate sized mining town. There were 2,783 employed miners, who made up 78.8% of the workers. The relation between the diagram for Thurnscoe and the theoretical diagram for a pure mining town is shown below and it will be seen that they are almost identical.

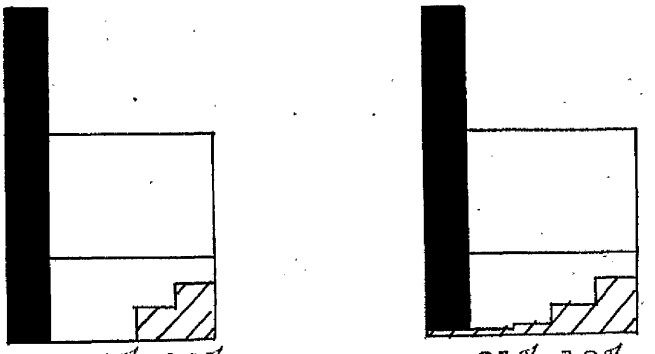


Fig. 57

There were 2,840 men employed in productive activities (268 per 1,000 inhabitants) and 474 people employed in "Regional Services" (45 per 1,000 inhabitants). The male unemployment rate was 9.6%. The "Regional Services" ratio is more than 15% below the standard for a production centre, whilst the production ratio lies between the standards fixed for pure production centres with no unemployment and with 15% male unemployment respectively. Thus the population of Thurnscoe is entirely dependent on its productive activities and the number of employed miners, 2,781, is slightly in excess of the number required to support a standard production centre of equal population (10,548) which would be 2,630. This slight excess is only to be expected since the unemployment rate is below normal. The next largest productive group consisted of 20 farm workers and, apart from the miners, all other men engaged in production totalled only 59. This number is only sufficient to support 240 people or less than 2.3% of the population, so that Thurnscoe depends to the extent of at least 97.7% on its mines.

The services provided in the town itself were very restricted. There were 204 people employed in the "Local Services" group; 153 of them in personal service and 48 in building and contracting. There were only two people employed in providing electricity, one in providing gas and no one at all in providing water; ~~and~~ this shows that,

as is so often the case with the smaller specialised centres, the public utility services were provided from elsewhere. "Regional Services", in this case concerned exclusively with supplying local needs, employed 471 people; the distributive trades employed 192 and other branches of commerce and finance 20 people. The local administration employed 146 people and another 12 were local representatives of the central administration. Transport services employed 48 people; 23 railwaymen and 25 road transport workers. The professions were represented by 20 people and there were 33 people associated with sport and entertainment. The latter figure is unusually high most similar towns having fewer than 10 in this category.

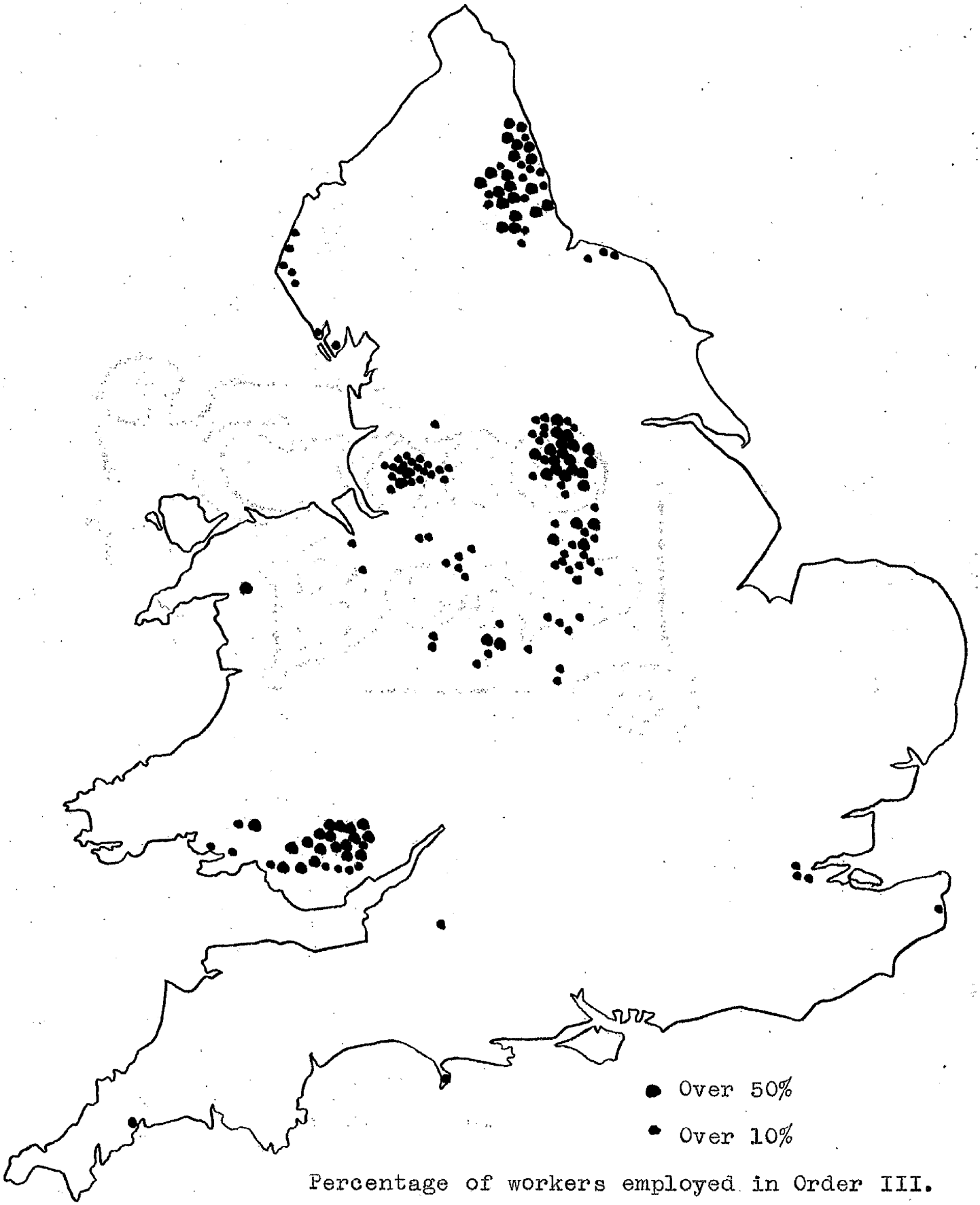
As in other mining towns a striking feature is the very restricted amount of employment available for women. Of the 5,541 people employed in the town only 269 were women, less than 8% of thetotal. A much larger number could be attracted into industry if employment were available locally and the number corresponding to the national average (27% of the female population) would be 1,350.

In England and Wales in 1931 there were 974,866 men employed in mining and quarrying and 212,643 miners out of work, an unemployment rate of 21.7%. The number of women associated with the Order was only 10,138 or less than 1% of the number of men. In spite of the high unemployment rate there were 178 Urban Districts with over 10% of

their workers employed in mining or quarrying and in 66 of Table 15 these the proportion was over 50%. The distribution of these towns is shown on the map opposite Fig. 58. Of the towns with over 50% of their workers employed in mining or quarrying 22 were on the Yorkshire, Nottinghamshire and Derbyshire coalfield, 21 in the Northumberland and Durham coalfield, 2 in Lancashire, 2 in South Staffordshire and one (Ffestiniog) in North Wales.

Other mining towns differ from Thurnscoe chiefly in having higher unemployment rates. A reduction in the number of miners employed does not result in a corresponding reduction in the number of people providing services, and consequently the proportion of miners among the employed workers is reduced. In many colliery towns the proportion of miners among the employed workers was 60% - 70% or even less instead of being nearly 80%.

Of the 66 Urban Districts with over 50% of their workers employed as miners 48 had fewer than 20,000 inhabitants corresponding to fewer than 5,000 miners. Nine towns had 20,000 - 30,000 inhabitants, six had 30,000 - 40,000, two had 40,000 - 50,000 inhabitants and only one, Rhondda U.D., had over 50,000 . Apart from Rhondda U.D. the two most populous were Gelligaer (41,000) and Aberdare (49,000). Gelligaer had 9,000 employed miners and 2,400 unemployed men; Aberdare had 9,800 employed miners and 3,200 unemployed men. It is unlikely that the total number of miners exceeded 11,000 and 12,500 respectively.



Percentage of workers employed in Order III.

Mining and Quarrying.

Fig. 58.

The effect of the restrictions placed on the concentration of miners by the conditions of production is confirmed by the fact that in 1931 no one centre had more than 10,000 miners working or a total exceeding 12,500 miners ~~altogether~~ even after a generous allowance for the unemployed. Moreover among the towns with over 50,000 inhabitants only the following ten had more than 5,000 employed miners, a number to be found in a mining town of 20,000 inhabitants;

Town	(1)	(2)	(3)	(4)
Chesterfield	64,160	5,400	6,510	214
Sunderland	185,824	5,665	6,836	104
Nottingham	268,801	6,506	7,896	54
Barnsley	71,542	8,403	10,414	335
St Helens	106,789	8,777	10,413	229
Wigan	85,357	7,740	10,903	228
Sheffield	511,757	8,918	11,198	48
Merthyr Tydfil	71,108	8,566	13,091	235
Stoke on Trent	276,639	17,220	21,230	144
Rhondda U.D.	141,346	27,784	38,791	655

(1) Population.
(2) Number of employed miners.
(3) Total number of miners. (including the unemployed).
(4) Proportion of employed miners per 1,000 workers.

There are two obvious consequences of this limitation on the number of miners ~~that~~ who can conveniently live at one c centre; firstly that most mining towns are small and the limit of size as long as the town depends exclusively on mining is of the order of 50,000 inhabitants. Secondly the development of other industries on a significant scale whilst it leads to a great increase in the population of the town, inevitably reduces the proportion of miners considerably. For example only four towns have more miners than Sheffield but they only amount to 4.8% of the workers/

miners than Sheffield but they only amount to 4.8% of the workers of that city of half a million inhabitants, which if it depended solely on ming would be about one tenth of its present size.

The apparent exceptions to the generalisation that the number of miners concentrated at one centre cannot exc exceed 12,500 under present conditions are Boroughs or Urban districts which cover exceptionally large areas over which the mining population is scattered or is at least divided between several distinct centres. Two of the examples come from South Wales where topography and structure have indueed a linear arrangement of pits and population along the deeply cut narrow valleys.

The borough of Merthyr Tydfil extends over 28 square miles. Its boundary is in the form of an isosceles triangle with a base five miles long just north of Merthyr and Dowlai and it includes eleven miles of the middle Taff valley, with the moors on either side, as far as Treharris in the south (Fig.59.

The county borough of Stoke on Trent also extends over a large area, 33 square miles. This large extent and the fact that the borough was created by the amalgamation of the "Five Towns" is an indication that the miners within the borough boundary are not concentrated around one centre.

The pre-eminence of the Rhondda Urban District in the number of miners within its boundaries is simply a reflect-

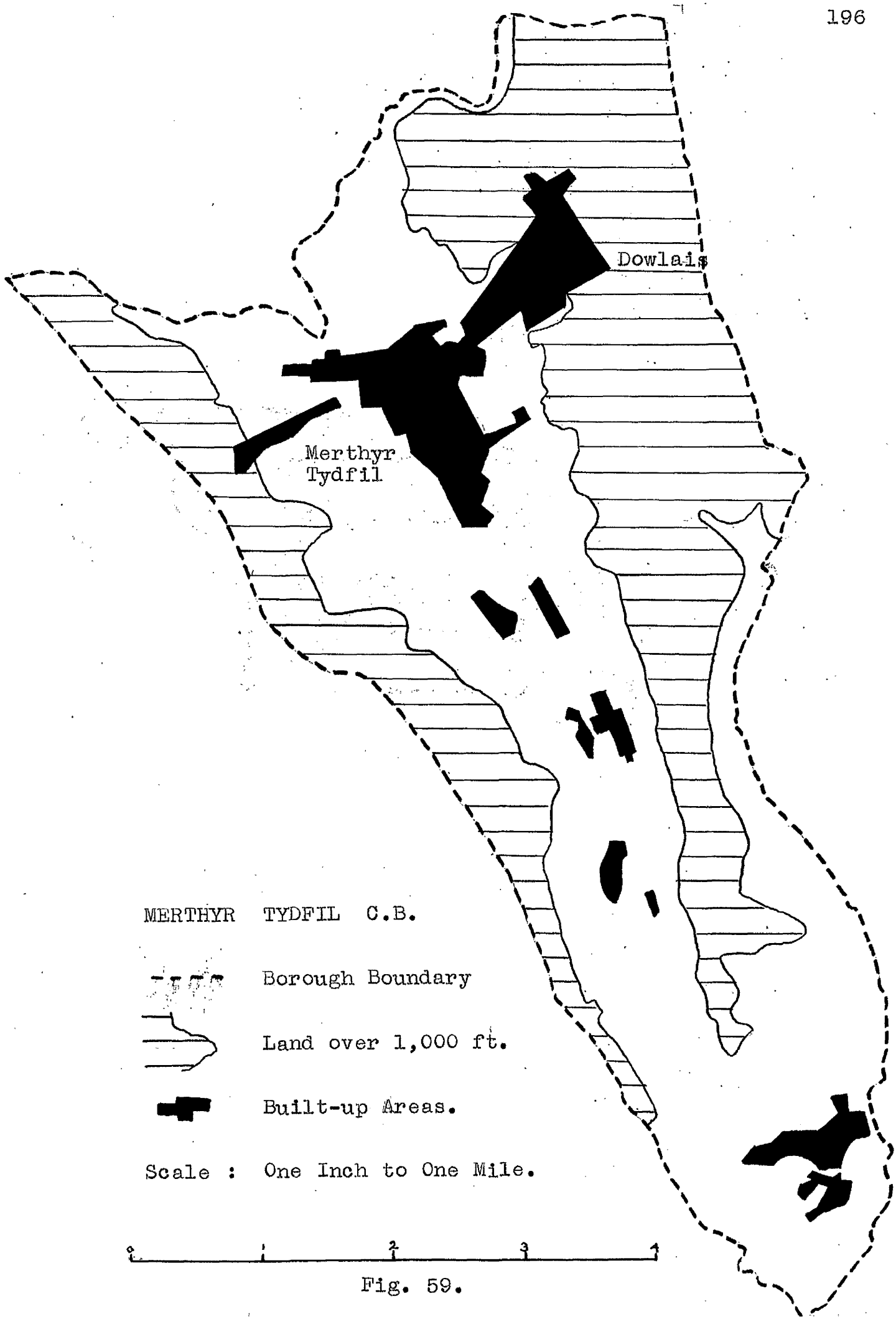

Dowlais
Merthyr
Tydfil
MERTHYR TYDFIL C.B.
Borough Boundary
Land over 1,000 ft.
Built-up Areas.
Scale : One Inch to One Mile.
0
1
2
3
4

Fig. 59.

ion of the fact that it is the most extensive urban district in any coalfield. It extends over 37 square miles and within this area there are at least nineteen separate nuclei of settlement, 14 in the Rhondda Valley and five in the adjacent Cwm Rhondda (Fig.60).

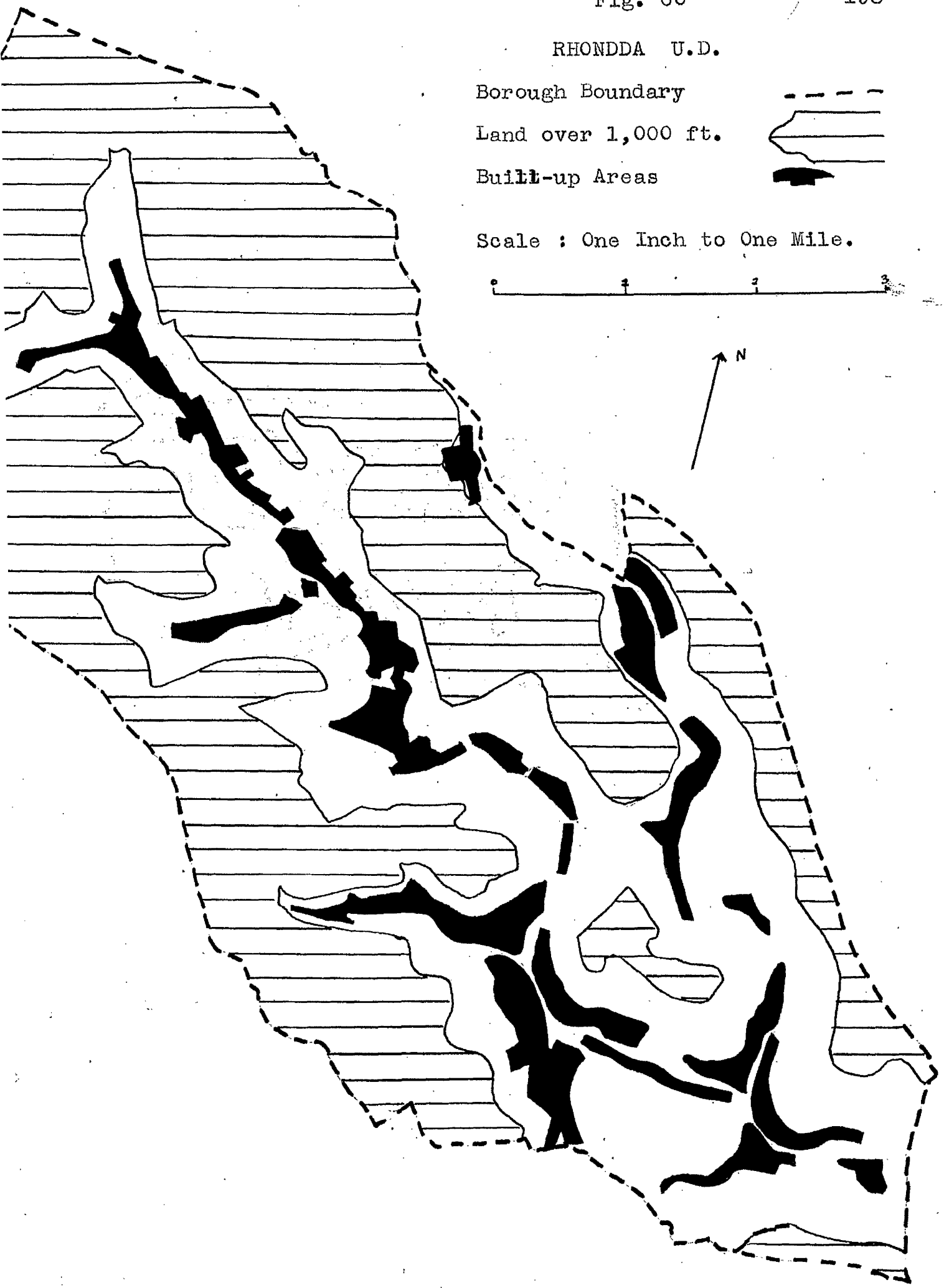
SUMMARY

This survey of the coal mining towns shows that they are numerous and highly specialised. Most of them have fewer than 5,000 miners and fewer than 20,000 inhabitants. Most of the coal producing towns have no other productive industries and only a meagre standard of local services, since over 70% of the working population is usually engaged in mining and less than 30% are left to supply services for the population.

The conditions of production in relation to the area of productive seams limits the number of miners at any one centre to 12,500 and consequently the maximum population of a town which depends solely on coal mining is about 50,000. In some of the smaller towns and in all of the larger ones with considerable numbers of miners, the development of other industries has resulted in an increase in the population of the town and a great reduction in the proportion of miners to the whole working population. Manufacturing industries can be concentrated into large towns, mining, like farming, cannot.

Fig. 60

RHONDDA U.D.



3) Fishing Ports.

Although fishing is another activity which, like agriculture and mining, is carried on over areas where the necessary resources are present, i.e. spread over the areas where fish are relatively abundant, there is in this case a complete divorce between the area where the work is carried on and the sites at which the fishermen live.

In Scotland and Cornwall and to a less extent in Devon, there is still a considerable amount of off-shore fishing carried on from small ports. The nature of the herring fishing industry also allows it to be successfully carried on from numerous moderate-sized ports and does not encourage further concentration. On the other hand those ports which have the best communications for the rapid transport of fresh fish to large consuming markets have a great advantage, for the trawling industry, and this dominant part of the fishing industry is becoming increasingly concentrated at a few ports.

Although the figure in the census includes "all persons aboard vessels in port on census night ....., except that persons on board vessels arriving in port after midnight on 26-27th April were excluded unless the vessels were in coast-wise or fishing voyage and arrived in port on or before the 9th May". The General Table:- Appendix A. Table ii gives the "Numbers and Nationalities of Persons employed on Fishing Vessels registered under Part 1 of the Merchant Shipping Act, 1894/

1894 at Ports in England and Wales, but not enumerated with the general population through absence at sea.

The number of fishermen in employment in England and Wales was returned in the Industry Tables as 34,134 and there were 5,686 fishermen unemployed; an unemployment rate of 16.6%. There were 1,591 women associated with the Order, only 4% of the number of men. The number of fishermen who were not enumerated with the general population through absence at sea from before April 26th until after May 9th was 2,864. The numbers associated with the chief ports are shown in the following table.

	(1)		(2)	(3)	(4)
Lincoln (Lindsey)	8,469	Grimsby	7,036	1,068	21.1
Yorkshire (E. Riding)	5,909	Hull	5,511	238	15.0
Lancashire	4,268	Fleetwood	3,586	407	10.4
Cornwall	2,493	Paul	962	30	2.6
Pembroke	2,347	Milford Haven	1,988	91	5.3
Suffolk	2,526	Lowestoft	1,711	265	511
Northumberland	1,638	Tynemouth	1,112	84	3.1
Norfolk	1,369	Yarmouth	1,369	49	3.7
Devon	1,260	Plymouth	308	53	0.9

(1) Number of workers returned as employed in Order I.
(2) Number of workers returned as employed in Order I.
(3) Number of fishermen absent at sea.
(4) Percentage of all employed workers in Order I associated with each port.

The extent to which concentration has gone is illustrated by the fact that 46.5% of the fishermen of England and Wales live in the three chief trawler ports; Grimsby, Hull and Fleetwood. The table also shows that Yarmouth is one of the six most important fishing ports

of England and Wales, but this has far too frequently been interpreted as meaning that Yarmouth is primarily a fishing port and that, directly or indirectly fishing provides the livelihood of a large proportion of the inhabitants and is the chief factor in the prosperity of the town. Actually, fishermen comprise less than 3% of the working population of Yarmouth. The fact that a town may be one of the most important centres of a particular industry, without that industry being one of the most important in the town is well illustrated by this case and must be constantly borne in mind, especially in the consideration of industries that employ comparatively small proportions of the workers of this country.

The Urban District with the largest proportion of its workers employed in fishing was Milford Haven (10,000). There were 2,071 men (including 91 absent at sea) and 8 women employed in fishing and these 2,079 people made up 46% of the workers in the town. The relation between the diagram for Milford Haven and one for a pure fishing settlement is shown below.

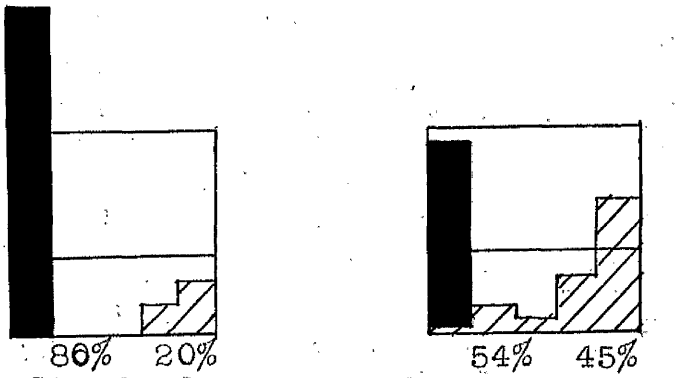


Fig. 61.

The proportion of fishermen in Milford Haven is not much more than half the theoretical maximum that would be attained if the productive activities were confined to catching fish, with 80% of the workers employed as fishermen and the rest merely providing services for the population of thetown itself. The difference is due to the peculiar relations between productive activities and "Regional Services" in a fishing port, in which the activities are not concerned merely with the catching of fish, but also with the landing, selling and transport of the fish. This will be seen if we examine the conditions at Milford Haven in detail.

There were 2,340 men employed in production/ (232 per 1,000 inhabitants, or, including the 91 fishermen (absent at sea, 241 per 1,000 inhabitants) and 1,424 people employed in "Regional Services" (140 per 1,000 (inhabitants). The male unemployment rate was 8.3%. These ratios are considerably in excess of the normal standards. The "Regional Services" ratio is consistent with 43% of the population being dependent on regional functions and the production ratio of 241 is consistent with 95% being dependent on productive activity; the total is 38% in excess of the actual population. It is to be noted that both Fleetwood (201 : 158) and Paul (261 : 104) fall similarly well above the standard line, i.e. the fishing ports do not agree with the standard relations between

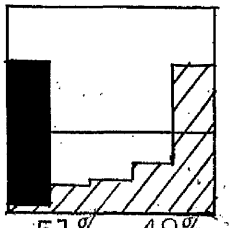
ordinary productive centres and regional centres and have characteristic relations of their own.

In Milford Haven the "Regional Services", which employed 1,424 people, differed considerably from those in normal regional centres. There were 329 men employed in transport, of whome 259 were connected with water transport and probably, although the statistics are not conclusive on the point, the bulk of these were dock-workers. Of the 808 people engaged in the distributive trades, probably over 400 men were employed by wholesale fishdealers, since the county of Pembroke had over 440 men so employed and no other Welsh county except Glamorgan had more than 10. These two groups alone employed about 750 men and would support about 3,000 people. The remaining people employed in "Regional Services" (700) were only just sufficient to serve the needs of the town itself and there was no excess for ordinary regional services. Thus there remain some 7,000 people dependent on the various productive activities. Apart from the fishermen there were only 360 men employed in productive activities, and such a number would not support more than 1500 people, leaving at least 5,500 people dependent on the 2,000 fishermen. This suggestes that the relation between the number of fishermen and the population they support is approximately 1:3 instead of the normal 1:4. Several of the productive activities are

intimately linked with the fishing industry; 131 men were employed in marine engineering, 23 men and 2 women in box-making and 9 men and 23 women in rope-making. The productive industries that have no connection with the fishing industry, agriculture, clothing, and food industries (the latter did not include the curing of fish) employed only 145 men.

Thus, despite the first impression from the diagram that a considerably higher degree of specialisation would be possible, it would appear that there are few of the activities of Milford Haven that are not related to its function as a fishing port. This suggests that in the case of a fishing port, with all its subsidiary activities of ship-repairing, rope- and box-making, landing, transporting and dealing in fish, the proportion between the number of fishermen and the total population is about 1:5.

The diagram for Fleetwood is essentially similar to that of Milford Haven.



Fleetwood
Fig.62.

If we include the men absent at sea, the total number of fishermen associated with Fleetwood is 3,987, almost

exactly double the number associated with Milford Haven and consequently sufficient for a fishing port of 20,000 inhabitants, leaving a balance of only 3,000 inhabitants contributed by other factors.

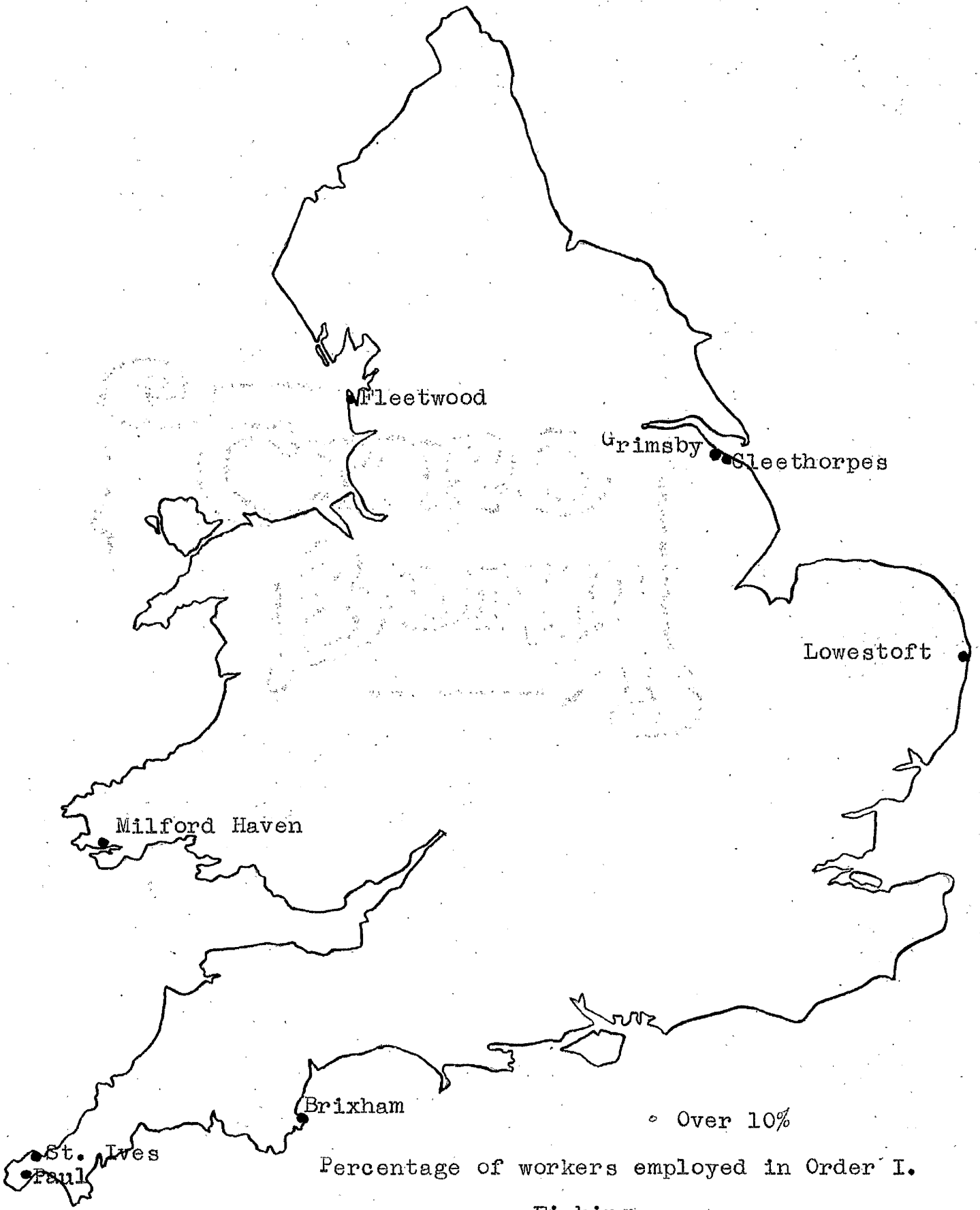
Specialised fishing ports are very rare; there were only eight towns with over 10% of their workers employed as fishermen and none with over 50%. The most specialised towns were Milford Haven (46%), Fleetwood (38.1), Paul (36.9%) Grimsby (18.9%), Cleethorpes, a residential suburb of Grimsby, (12.2%), Brixham (11.7%), Lowestoft (11.5%) and St. Ives (10.0%).

There is no case in this country of fishing alone giving rise to or maintaining a large town. Grimsby (92,000) has a higher proportion of its workingpopulation employed in fishing than any other large town, but even there the proportion is less than 19% and in Hull and Yarmouth the proportions are under 5% and 3% respectively. Fishing is only one among many activities ~~XX~~ carried on in thesethree large towns. If they were dependent on fishing to the same extent as Milford Haven, Yarmouth would have only 7,000 inhabitants instead of 57,000, Hull 27,000 instead of 315,000 and Grimsby 35,000 instead of 92,000.

Summary

Summary

The three Orders ~~Summary~~ed with Primary Production, although distinguished from all other industries by their direct relation to natural resources, are not related to each other and no two are ever of significant importance in the same town.



Percentage of workers employed in Order I.

Fishing.

Fig. 63.

II MANUFACTURING TOWNS.

In the case of the Manufacturing industries there is a direct relation between the employment normally available for men at a particular factory and the number of people likely to be attracted to live near it. There does not seem to be nay theoretical limit to the number of workers who could be attracted to or maintained in one town provided employment were available. Similarly the only limit to the proportion of the workers engaged in a specialised industry is the necessity for the provision of services for the inhabitants. The minimum proportion of workers employed in providing services is 15%, leaving 85% available for productive activity, and the highest proportion of the workers actually employed in manufacturing industries was 80% at Marsden, and of these no less than 74.8% were employed in the woollen industry.

In 1931 there were 4,152,221 men associated with manufacturing industries in England and Wales; 3,483,968 were employed and 668,253 out of work so that the average rate of male unemployment was 19.2%. The number of women associated with manufacturing industries was 2,117,034 or 51% of the number of men.

The individual industries, and correspondingly the induvidual towns differ considerably in the prevailing rate of unemployment and in the proportion of women associated with/

with production, and consequently in the proportion of the female population associated with paid work.

The characteristics of the different Orders of manufacturing industry are shown in the table below.

Order IV.	Manufacture of Bricks, Pottery and Glass.
Order V.	Manufacture of Chemicals etc.
Order VI.	Metallurgical and Engineering industries.
Order VII.	Textile Industries.
Order VIII.	Skins and Leather.
Order IX.	Clothing Industries.
Order X.	Food Industries.
Order XI.	Wood Working.
Order XII.	Paper Making.
Order XIV.	Other manufacturing industries.

Order	(1)	(2)	(3)	(4)	(5)	(6)
IV	135,300	21,290	156,590	15.8	57,889	36.9
V	142,539	21,391	163,930	15.0	53,260	32.5
VI	1,503,620	388,316	1,891,936	25.8	293,200	15.5
VII	408,530	86,781	495,311	21.3	690,467	140.0
XII	50,554	7,851	58,405	15.6	27,248	46.5
IX	289,919	28,477	318,396	9.8	514,752	162.0
X	352,616	39,219	391,835	11.1	224,704	57.0
XI	210,930	34,165	245,095	16.2	30,693	12.5
XII	270,664	22,208	292,872	812	151,555	51.5
XIV	119,242	18,555	137,797	15.6	73,226	53.0

1) Number of men employed.
2) Number of men unemployed.
3) Total number of men associated with the Order.
4) Unemployed men as a percentage of employed men.
5) Number of women associated with the Order.
6) Women associated with Order as a percentage of the men.

This table shows that the two most important Orders, judged by the number of men associated with them, are the metallurgical industries and textile industries. These are also the two manufacturing industries in which the rate of male unemployment was considerably in excess of the national average. Consequently in many of the towns which depend largely on one of these industries the number of men in employment at the time of the Census was considerably

less than normal for the size of the town. The table also shows that there are two Orders in which women workers are more numerous than men; the textile industries and the clothing industries.

The Urban District with the largest proportion of its workers employed in the manufacturing industries was Marsden (5,700), a small woollen manufacturing town in the upper part of the Colne Valley in the West Riding, south west of Huddersfield. There were 1,415 men and 1,018 women employed in the manufacturing industries and these 2,433 people made up 80% of the workers in the Urban District. The large number of women employed is not a characteristic common to all manufacturing towns.

The relation between the diagram for Marsden and that for an industrial town in which a considerable proportion of women are employed is shown below. It will be seen that they are almost identical. The number of people employed in primary production was only 1.5% of the total.

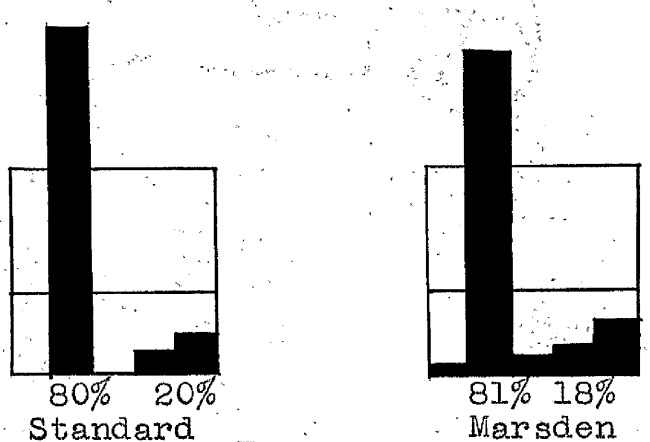


Fig. 64.

There were 1,458 men employed in production (256 per 1,000 inhabitants) and only 373 people were employed in

"Regional Services" (65 per 1,000 inhabitants). The male unemployment rate was 9.7%. The "Regional Services" ratio is slightly less than the standard for a productive centre and the production ratio is slightly in excess of the standard, and excess that agrees with the unemployment rate which was slightly below the average.

Thus Marsden has no regional function and the whole population is dependent on the productive activities. The number of men employed in manufacturing industries (1,415) is sufficient to support 5,660 people or 98% of the population and there were only 43 men, of whom 40 were farm workers, employed in primary production. These men were only sufficient to support 170 people or 3% of the population. ~~of~~ It may be concluded that at least 97% of the population of Marsden is dependent on the manufacturing industries.

As in all manufacturing towns there is only a small proportion of workers employed in personal services. In Marsden there were only 100 people employed in these services; (17 per 1,000 inhabitants); they were 3.3% of the workers. The other people employed in local services were 60 men in building and contracting, 17 in the gasworks, 5 in the waterworks, and one employee of an electricity supply company. Thus it is clear that the town electricity supply comes from outside.

The 373 people employed in "Regional Services" were classified as follows; 182 in the distributive trades and

12 other forms of commerce and finance; 88 transport workers including 44 railwaymen, 25 road transport workers, and 14 water transport workers (Marsden is situated on one of the trans-Pennine canals). There were 54 people employed in the local administrative servives and 15 representatives of the central administration[1].

The professions were represented by 16 people and there were 6 people employed in providing entertainment.

Thus Marsden provides an excellent example of a small but highly specialised manufacturing town. It is however by no means a unique example. There were 29 towns with over 70% of their workers employed in manufacturing industries and 160 with over 50% of their workers so employed. (Table 16) The distribution of these towns will be considered after the distribution of towns in which particular industries or branches of industry are predominant.

The very widespread distribution of manufacturing industries in this country is shown by the fact that of the towns with over 5,000 inhabitants there were only 90 (13% of the total) in which fewer than 10% of the workers were employed in such industries.

~~Order XI~~

ical
Metallurgy and Engineering. Towns.

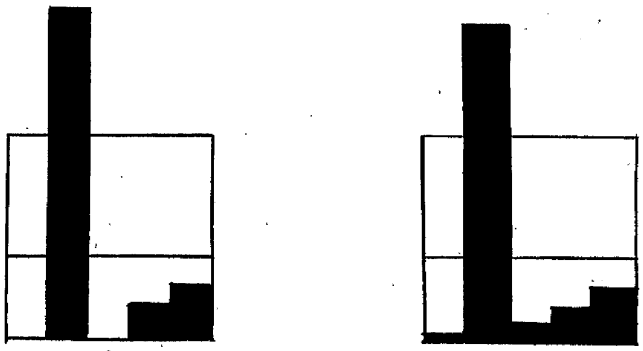
This Order VI includes a very wide range of activities, from the humble village blacksmith's shop to giant steel mills. In consequence of the universal demand for metal articles and especially for simple repairs, there are a few representatives of the Order in every Urban District in the country.

In 1931 there were 1,891,936 men associated with the metallurgical and engineering industries in England and Wales; 1,503,620 employed and 388,316 unemployed, so that the average rate of male unemployment was 25.8%. The number of women associated with the Order was 293,300 or 15.5% of the number ofmen.

The Urban District with the largest proportion of its workers employed in the metallurgical industries was Darlaston (20,000), in the Black Country, two miles from Walsall. There were 4,152 men and 1,709 women employed in the metal industries and these 5,861 people made up 75.1% of the workers in the Urban district. Such comparatively large proportions of women are employed only in the lighter branches of the metallurgical industries which are characteristic of the Black Country and particularly of Darlaston. The relation between the diagram for Darlaston

and/

and that for a manufacturing town concerned entirely with the metal industries is shown below. Darlaston diverges only in having 3.4% of its workers employed in minor industries and 0.4% in primary production.



80% 20% 80% 19%
Standard Fig. 65. Darlaston

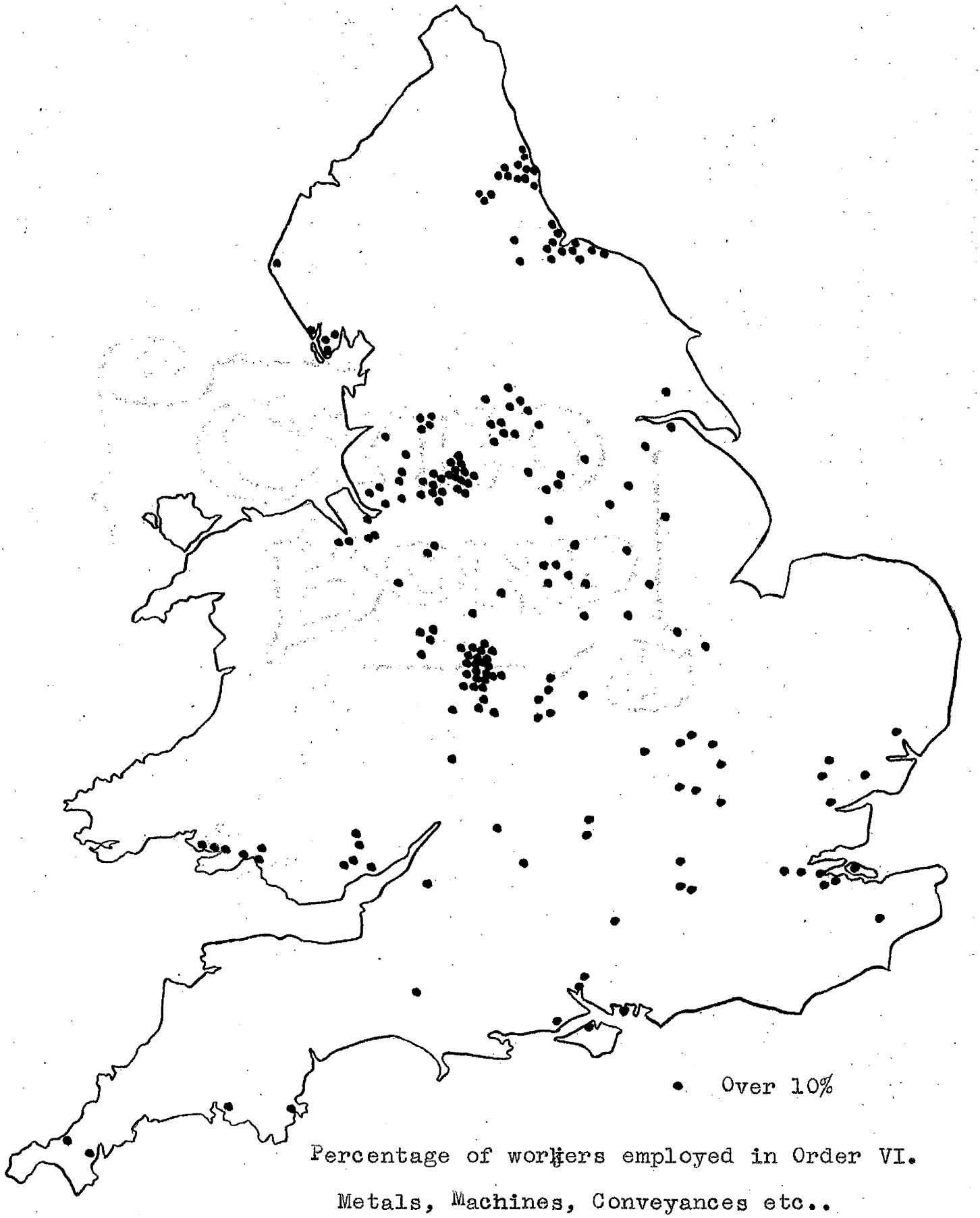
There were 4,432 men employed in production (225 per 1,000 inhabitants) and 971 people employed in "Regional Services" (49 per 1,000 inhabitants). The male unemployment rate was 24.7%. The "Regional Services" ratio was nearly 15% below the standard for a productive centre and this indicates that instead of having a surplus of services for a surrounding area, the town depended to a considerable extent on services provided from Walsall. The production ratio is consistent with 87% of the population being dependent on productive activities. In view of the abnormally high unemployment rate it is desirable to make an adjustment to find the figure that would result if the unemployment rate were reduced from 24.7% to the standard 15%. The production ratio corresponding to the standard rate of unemployment is 245 per 1,000 inhabitants which is consistent with 97% of the population being dependent on productive activities. Thus Darlaston has no regional function/

function and the number of men employed in productive activities issufficient, if allowance is made for the excessive unemployment, to support a standard production centre with 97% of the population of Darlaston.

The 4,152 men employed in the metal industries could support a town of 16,600 people, and after making allowance for theunemployment, the figure is 18,000 or 91% of the population of the town. The next largest productive group was 88 men employedin brickmaking, and the total employed in productive activities other than metal industries was only 279 men. This number, even with due allowance for unemployment, could not support more than 1,200 people or only 6% of the population. Thus it seems clear that between 91% and 94% of the population of Darlaston is dependent on metallurgical industries.

No other town has over 70% of its workers engaged in the metallurgical industries but in spite of the very high rate of unemployment in most branches of the Order there were no less than 190 urban districts in which the metal industries employed over 10% of the workers (Table 17) and of these 63 had 25-50% of their workers employed in this Order and there were 15 in which the proportion was over 50%. The map shows the distribution of the towns with over 25% of their workers employed in the metal industries.

The most striking feature of the map is the large concentration in the "Black Country", where in a close packed group, there were 12 out of the 15 towns in which the/



Percentage of workers employed in Order VI.

Metals, Machines, Conveyances etc..

Fig. 66

the proportion of workers employed in metallurgy was over 50% and 11 other towns in which the proportion was over 25%. Other groups of towns with over 25% of their workers employed in metallurgy are near the lower Tees (6), near the lower Tyne (5), on the South Wales coast (4), in the Sheffield District (3), and there are nine others scattered over a fairly wide area in South Lancashire and North Cheshire.

The activities included in Order VI are extremely varied and the towns shown on the map are far from being of uniform type. As a preliminary step they may be divided according to the dominant sub-order. The Census recognises ten sub-Orders:

1. Smelting, Converting, Refining, and Rolling of Iron and Steel.
2. Extracting and Refining of Other Metals and Alloys.
3. Founding and Other Secondary Processes in Metal Working.
4. Engineering (not Marine or Electrical).
5. Electrical Installations, Cables and Apparatus.
6. Construction and Repair of Vehicles.
7. Ship Building and Repairing and Marine Engineering.
8. Cutlery and Small Tools, (Not Machine Tools).
9. Other Metal Industries (not Precious Metals, Jewellery, or Plate).
10. Precious Metals, Jewellery, Plate.

The labour statistics of these sub-Orders are tabulated below:

	(1)	(2)	(3)	(4)	(5)	(6)
1.	125,092	45,059	170,151	36	4,179	2.5
2.	11,409	4,391	15,750	38	1,259	8.0
3.	188,786	47,804	236,890	25	23,248	9.8
4.	348,056	83,691	431,747	24	35,212	8.2
5.	173,800	26,161	199,961	15	68,263	34.0
6.	290,342	51,138	341,480	18	40,697	12.0
7.	115,267	82,376	197,643	71	3,156	2.7
8.	28,730	7,053	35,783	24	15,783	44.0
9.	190,824	36,826	227,650	19	83,786	37.0
10.	31,314	3,867	35,181	12	16,943	48.0

1) Number of men employed.
2) Number of men out of work.
3) Total number of men associated with the sub-Order.
4) Number of women associated with the sub-Order.
5) Unemployed men as a percentage of employed men.
6) Women as a percentage of men associated with the sub-Order.

Associated with the great complexity of the Order as a whole is the very high degree of specialisation in the individual towns; except for sub-Order 10 there is as each sub-Order is predominant in at least one town, and in many towns virtually all the workers in the Order are employed in one sub-Order or even in one particular activity.

Apart from sub-Order 10, which is nowhere predominant and sub-Order 2 (Non-Ferrous Metals) which predominates only at Widnes, these sub-Orders may be arranged in three main groups:

A. The Heavy Metal Industries.
Sub-Order 1. Iron and Steel Industry.
Sub-Order 2. Secondary Metallurgical Industries.

B. The Engineering Industries.
Sub-Order 4 Engineering
Sub-Order 5 Electrical Engineering
Sub-Order 6 Vehicles
Sub-Order 7 Shipbuilding and Marine Engineering.

C. Light Metal Manufacturing Industries
Sub-Order 8. Cutlery and Tools
Sub-Order 9. Hardware Industries.

The following towns show the highest degree of specialisation in the respective sub-Orders:

			(1)
Sub-Order 1	Iron and Steel Industry	Scunthorpe and Frodingham	44.2
Sub-Order 2	Non-Ferrous metals	Widnes	3.8
Sub-Orders 3	Secondary metallurgical Industries (Tinplate)	Llwchwr	35.3
Sub-Order 4	Engineering	Gainsborough	33.2
Sub-Order 5	Electrical Engineering	Prescot	53.8
Sub-Order 6	Vehicles	Wolverton	47.5
Sub-Order 7	Shipbuilding	Barrow in Furness	40.5
Sub-Order 8	Cutlery and small tools	Redditch	17.1
Sub-Order 9	Light metal industries	Darlaston	51.2
Sub-Order 10	Jewllery etc.	Sheffield	4.0

(1) Percentage of workers employed in the sub-Order

There are examples of towns showing a considerable degree of specialisation in seven of the ten sub-Orders; the exceptions are the cutlery and small tools industry which even in the most specialised town employed only 17.1% of the workers, (in Sheffield only 10.6%), the Jewellery and Plate industry which nowhere employs more than 4% of the workers and obciously represents an insignificant proportion of the activities of Sheffield, and the refining of non-ferrous metals which even Widnes, employs only 3.8% of the workers.

a) Metallurgical Centres.

The heavy metal industries include the smelting, converting, refining and rolling of iron and steel and founding and other secondary processes in metal working. These activities had 407,000 men associated with them, or 21.5% of the total in the Order. The actual smelting of iron from ore employs fewer than 8,000 of these men nevertheless the other activities have been attracted very largely to the places where iron can be cheaply manufactured.

1) Towns concerned chiefly with the Iron or Steel Industry

The following is a list of towns in which the Iron and Steel (sub-Order1) industries predominate:

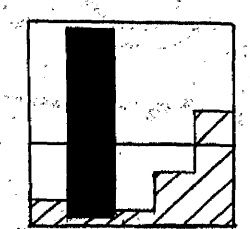
Eston	54.0
Stocksbridge	49.3
Scunthorpe and Frodingham	48.3
Consett	42.1
Sheffield	37.9
Port Talbot	37.7
Benfieldside	35.0
Rotheram	33.4
Brierley Hill	33.4
Workington	32.9
Redcar	30.9
Loftus	30.6
Middlesborough	30.4
Irlam	26.8

There are only two districts in which there is any concentration. The Sheffield steel industry, especially since the development of the heavier branches, has spread beyond the limits of the city itself and is predominant in Rotherham and Stocksbridge as well.

Similarly the smelting and steelmaking industries that originated in the Middlesborough district have been paralleled in the neighbouring districts of Eston, Redcar and Loftus. This great development has been based on the unique relation to ore and fuel supplies within easy reach of sea transport, available both for export of finished products and imports of supplementary supplies of ~~iron.~~ ore The other towns in which the heavy industries predominate are widely scattered; some are related to local supplies of ore; Scunthorpe and Frodingham adjacent to the Lincolnshire ore deposits, and Workington, adjacent to the Cumberland ores. The other towns are more dependent on local consuming markets than on ore supplies; the Consett works which employ a considerable proportion of the workers in that Urban district and in the neighbouring Benfieldside, Port Talbot, on the South Wales coast, and Irlam, beside the Manchester Ship Canal. In spite of its history as one of the pioneer areas in the development of the technique of smelting iron ore with coal and coke there is only one Urban district in the Black Country in which the Iron and Steel industry is predominant, Brierley Hill.

The Urban District with the largest proportion of its workers employed in the iron and steel industry was Scunthorpe and Frodingham (33,761) at the foot of Lincoln Edge. The large easily quarried depsoits of iron ore, similar to the Cleveland ores, have attracted to this site the most recent developments of the heavy metal industries. Following the first production of ore for smelting in other areas there came the foundation of local blast furnaces, and later with the development of modern techniques which made it desirable that blast furnaces, steel works and rolling-mills should be arranged adjacent to each other so as to allow continous working, this was chosen as one of the most suitable sites in the country, for such new works, and large scale extensions are still being made.

There were 5,322 men and 104 women employed in the iron and steel industry and they made up 44.2% of the workers in the town.



Scunthorpe
&
Frodingham
Fig.67

In 1931 there were 6,753 men employed in production (200 per 1,000 inhabitants) and 3,482 people employed in "Regional Services" (103 per 1,000 inhabitants). The male unemployment rate was 18.4%. These ratios are consistent

with 20% of the population (6,700) being dependent on Regional functions and 75% of the population (25,200) being dependent on productive activities. The 5,822 men employed in the metallurgical industries are sufficient to support a town of 23,300 people equal to 63% of the population of Scunthorpe and Frodingham and of these 21,300, were dependent on the smelting and the steel works and all other branches of the metal industries employed only 500 men and supported only 2,000 people.

All other productive activities employed only 931 men and the only two of any significance are the quarrying and treatment of the mineral products which employed 361 men and supported 4% of the population and farming which employed 190 men and supported 2% of the population.

Centres of
Sub-Order 5. Secondary Metallurgical Industries.

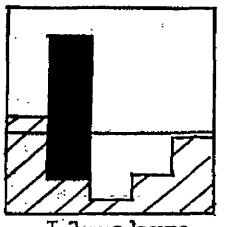
The highly integrated modern iron and steel works are on such a large scale that they employ a considerable proportion of the workers in any town in which they operate, and the same is the case with the Secondary branches of the heavy metal industries.

The following is a list of the towns in which the secondary metallurgical industries predominate.

Halesowen	52.3
Oldbury	46.2
Llanelly	45.4
Llwchwr	42.8
Ellesmere Port and Whitby	36.2
Warrington	31.3
Neath	30.7

Their distribution is quite independent of that of the other branchesof the Heavy Metal Industries, and in the individual towns the workers are almost all employed in one particular branch of work. The three towns in South Wales, Llanelly, Llwchwr and Neath are concerned almost exclusively with the tin-plate industry; in Halesowen and Oldbury in the Black Country themanufacture of iron and steel tubes is carriedon on a sufficient scale to exceed the light metal industries which are characteristic of the adjacent districts. In Ellesmere Port the high proportion of workers in Order VII is due to the existence of lagge scale galvanising works, and in Warrington the activity which makes sub-Order 3 dominant over the Steel industry and light castings, is the manufacture of wire, wire netting and wire ropes.

The town which is most dependent on the secondary metallurgical industries is Llwchwr or Loughor (26,595) where the unemployment rate was 16.6% and the 3,896 men employed in the metallurgical industries were sufficient to support 15,600 people or 59% of the population of the town, of whom 12,500 or 47% were dependent on the secondary metallurgical industries, chiefly tin-plating.



Llwchwr
Fig.68.

2) The Engineering Centres

The towns in which the engineering industries are important are even more widely distributed than those in the previous group. The limited fuel requirements of the engineering industries frees them from the necessity of being close to a coalfield, and since the cost of transport of raw material is only a small part of their total costs they need not be close to the iron smelting districts, consequently they have an almost unrestricted choice of site. The only activity to which this does not apply is ship-building.

1) Shipbuilding Centres

There were 198,643 men associated with shipbuilding; 115,267 employed and 82,376 unemployed. The number of unemployed men was 71% of the number employed, but in spite of this exceptionally high rate of unemployment there was one Urban District where over 50% of the total employed weree shipyard workers and 7 in which the proportion exceeded 25%. They were:

	(1)	(2)
Hebburn	50.2	92.0
Barrow in Furness	49.5	20.8
Wallsend	35.8	65.0
Jarrow	31.7	128.5
Cowes	27.8	15.4
Sheerness	26.7	8.2
Dalton in Furness	25.6	29.5

(1) Percentage of workers employed in metallurgical industries.
(2) Unemployed men as a percentage of employed men.

In view of the very high rates of unemployment these proportions are of course not representative of the real

importance of the metallurgical industries to the towns and since the unemployed men, who at Jarrow were more numerous than those in employment, are not classified it is not possible to estimate what proportion of their population was dependent on the metallurgical industries except in the case of Barrow in Furness (66,200). The 15,026 men associated with the metallurgical industries there, were sufficient to support 54,000 inhabitants or 82% of the population of Barrow. Of this total 12,314 men were associated with shipbuilding and they were sufficient to support 44,500 people or 67% of the population of the town. Almost all the other men associated with the metallurgical industries were attached to the steel works.

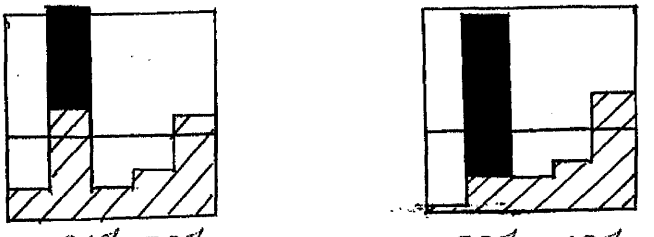


Fig. 69.

2) Other Engineering Centres.

The other engineering industries are subdivided into three different sub-Orders: engineering, electrical engineering, and the manufacture of vehicles. With one exception which cuts across this classification, they may best be regarded as one group, within which the specialisations are much more numerous than the sub-Orders. An essential feature of this group is the comparative freedom in the choice of site, that is to say the very limited influence of its position within the country on the success or failure of any project. Consequently, innumerable engineering industries were established on a small scale in towns scattered widely over the country, a few of these have grown to great size, and have come to employ a considerable proportion of the workers in the town in which they were founded, and so to contribute significantly to its growth and prosperity. In some places the industry has grown to such an extent as to dominate the life of the whole town; a state of affairs that occured more readily when the industry was set up in a small town than in a large one. For example 1,000 men employed in an engineering industry would maintain 3,500 people or 70% of the population of a town of 5,000 inhabitantsor 35% of a town of 10,000 inhabitants, but would, of course, only support 7% and 3.5% of the population of towns ten times as large. The scale of modern engineering industries is so large that the foundation of a new industry may have an immediate and great

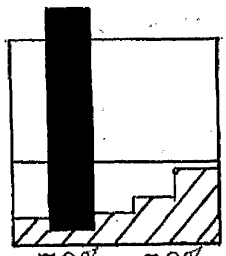
effect on the amount and character of the employment available in the town chosen for its site. The following lists give the towns in which the different engineering Sub-Orders are predominant:

Engineering		Vehicles	
Swindon	47.8	Coventry	51.0
Eastleigh and Bishopstoke	41.2	Wolverton	48.3
Newton in Makerfield	38.7	Birmingham	39.5
Gainsborough	35.2	North Bromsgrove	34.3
Chelmsford	34.6	Shildon	30.0
Horwich	32.3	Leyland	26.8
Oakengates	30.8	Kenilworth	26.1
Crewe	30.5	Derby	26.0
Lincoln	29.5	Bromsgrove	25.2
Darlington	28.5		
Chippenham	28.2		
Newark	27.3		
Altrincham	25.9	**Electrical**	
Uttoxeter	25.8		
Ashford	25.3	Prescot	56.8
Letchworth	25.2	Rugby	42.6
Loughborough	25.0	Beeston	25.2

Two of the most striking examples of specialisation in the engineering industries have been provided by the growth of the cable-making industry at Prescot and engineering industry at Gainsborough.

Prescot (9,400) shwos the remarkable degree of specialisation produced by the development of a large scale industry in a small town. There were 1,837 men and 428 women employed in the metal industries and they made up 56.8% of the workers, the largest proportion in any town outside the "Black Country".

Fig. 70.

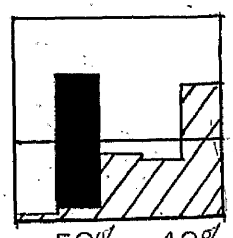


Prescot

The number ofmen employed in the metal industries, 1,837, was sufficient to support a town of 7,350 inhabitants, and of these 1,753, sufficient to support 7,000 people, were associated with the cable making industry, which also employed 388 women. Thus Prescot was dependent to the extent of 74% on the cable making industry.

Gainsborough (18,689) has a larger proportion of its workers employed in the engineering industry than any other urban district.

Fig. 71.



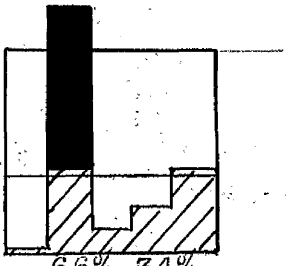
Gainsborough

It provides a good example of the growth of a small market town after the expansion of a successful engineering industry. There were 2,064 people employed in "Regional

Services" (110 per 1,000 inhabitants) and this ratio is consistent with 24% of the population (4,500 people) being dependent on regional functions. The remaining 14,000 people were dependent on the productive activities, in which 3,045 men were employed (164 per 1,000 inhabitants) The proportion of unemployed men 37.5% was relatively high. If the production ratio is adjusted to compensate for the excessive unemployment it becomes 200 and the revised ratio is consistent with 75% of the population being dependent on productive activities (14,000 people). The 2,002 men employed in the engineering industry were only sufficient to support 8,000 people. All the other productive activities employed only 1,043 men and could not support more than 4,000 people and in fact only three of them seem to be of significance; the wood working industry (391 men), the chemical industry (112 men) and farming (76 men). These three would support only 2,000. people. Thus there is a balance of between 2,000 and and 4,000 people dependent on productive workers who were unemployed at the time of the census and there can be little doubt that the bulk of these were associated with the engineering industry.

Coventry provides an example of a still larger development of engineering industries. In Coventry 30,464 men and 7,050 women were employed in the metallurgical industries and in these 37,514 people

made up 51% of the total workers.



Coventry

Fig.72.

There were 36,564 men associated with the metallurgical industries and that number was sufficient to support 133,000 people or 80% of the population of Covent ry. Of these men, 32,324 were associated with engineering group of industries and they were sufficient to support 118,000 people or 71% of the population of the town. Even by 1931 the motor industry had expanded sufficiently to have carried the total number of men associated with vehicle building to 23,483, sufficient to support 85,000 people, or 51% of the population. It may be noted that among the "Black Country" towns the construction of vehicles is predominant only in the Bromsgroves, and Birmingham. Thus whilst the smaller towns manufacture components and fittings for motor cars among all the other light metal products, the assembly of the cars is carried on mainly in the vicinity of Birmingham itself. Although the number of men associated with the industry is much greater in Birmingham than in Coventry (42,038 compared with 23,843) the relative importance of the

industry/

industry is much smaller in Birmingham

c) Railway Towns.

Several of the towns in the above lists owe their character or even their existence to the railways. The railway companies in choosing sites for workshops for the building and repair of their locomotives and rolling stock sometimes chose comparatively large towns where the workshops were relatively unimportant among the many varied activities, but in other cases they chose small towns or entirely undeveloped sites. The more specialised ones are listed below.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ashford	826	708	1,534	6,000	15,250	40	556
Horwich	2,041	92	2,133	8,500	15,680	54	135
Eastleigh and Bishopstoke	1,395	1,046	2,441	9,750	18,335	53	1,123
Wolverton	15	2,426	2,441	9,750	12,873	76	183
Newton in Makerfield	1,627	1,208	2,835	11,300	21,152	53	162
Crewe	5,108	315	5,423	21,700	46,100	52	3,532

(1) No. of men employed in sub-Order 4 (Engineering).
(2) No. of men employed in sub-Order 6 (Vehicles).
(3) Total of (1) and (2).
(4) (3) x 4: no. of dependent people employed.
(5) Population.
(6) Percentage of population dependent on railway workshops.
(7) Men employed in railway operating.

Some of the works are only of moderate size; for example Ashford, Horwich, Eastleigh and Wolverton. In none of these were as many as 2,500 men employed by the railways but since all the towns had fewer than 20,000 inhabitants, the proportions of their populations dependent on the railway workshops were between 40% and 76%. Some of the works (Eastleigh and Ashford) made both locomotives and/

and rolling stock, only rolling stock was made at Wolverton, whilst at Horwich and Crewe only the locomotive building works were important. It will be noted that whilst Crewe and Eastleigh are important railway operating centres the others are not.

Crewe (46,000) presents an excellent example of a town created by railway activities, in which the engineering and operating activities are both important. The number of men employed in the engineering and vehicle building (almost exclusively in the railway workshops) was 5,423 and there were 3,532 men employed on the railway operating staff. This total of 8,955 railwaymen is sufficient to support a town of 36,000 inhabitants or 78% of the population of Crewe; of these 21,600 people or 47% were dependent on engineering and 14,100 or 31% on operating. The proportion of the workers employed in these two groups is distinguished below. All other forms of production employed only 925 men and the only important group was 291 men employed in the clothing industry.

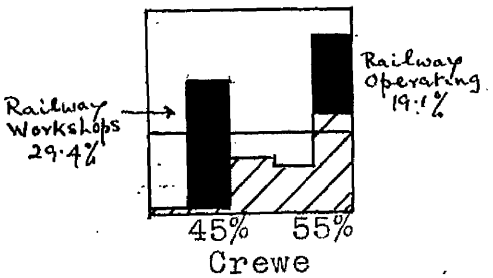


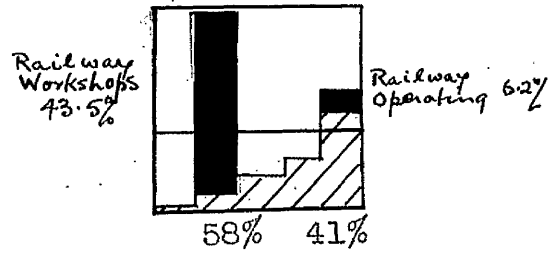
Fig. 73

According to the ordinary classification the different types of railway employee were divided between the productive activities and the "Regional Services". According to this division there were 6,248 men employed in production (135 per 1,000 inhabitants) and 8,133 people employed in "Regional Services" (177 per 1,000 inhabitants). The male unemployment rate was 16.1%. In this case, however, the point of interest is different; it is desirable to distinguish the proportion of the population dependent on ordinary regional services, excluding railway activities. If the railwaymen are transferred and grouped with the productive workers, the ratios become 2 1 per 1,000 inhabitants employed on railway and productive activities and 91 per 1,000 employed in ordinary regional services. These ratios are consistent with 80% of the population (37,000) being dependent on railway and productive activities (36,000 on the railway and 1,000 on the clothing industry), and 15% of the population (7,000) being dependent on ordinary regional services. This total is within 2,000 of the actual population.

The opportunities for women to obtain work in such a town were limited; the local and regional services employed only 2,582 women and the ordinary productive industries only 358, a total of fewer than 3,000 out of some 11,000 women available for employment. This reserve of female labour attracted a clothing industry which employed 1,650 women, bringing the number of women associated with/

with paid work up to 4,888, but there is still room for considerable expansion.

The largest and most specialised of the railway towns was Swindon (62,400) founded by the largest of the early railway companies. The number of men associated with engineering and vehicle building was 12,435, and there were 1,481 men associated with railway operating. This total of 13,916 men is sufficient to support 50,700 people or 81% of the population of Swindon; 45,300 or 72% being dependent on engineering and 5,400 or 9% on railway operating. The more detailed classification available in this case allows the removal of 710 men in the above group who were not employed by the railway. The 3,206 men who were associated with the railway company were sufficient to support 48,000 people or 77% of the population. The engineering and operating staffs of the railway in employment are distinguished on the following diagram.



Swindon
Fig, 74.

Again it is advisable to separate the railway workers from those employed in other regional services and group them with the productive workers. This reduces the "Regional/

"Regional Services" ratio from 128 to 101 per 1,000 inhabitants and increases the production ratio from 223 to 247 per 1,000 inhabitants. These ratios are consistent with 89% of the population (56,000) being dependent on railway and productive activities and 14% (9,000) on ordinary regional services. The total is only 2,600 in excess of the actual population. The only productive industries of importance, apart from the metallurgical industries, are clothing (259 men and 800 women) and the tobacco industry (237 men and 514 women). These have probably not added more than 2,000 to the population of the town.

As in the case of Crewe the opportunities for women to find work are limited; the local and regional services employed only 3,616 women, and the productive industries employed 2,071; 657 in the engineering industry and apart from that the tailoring and the tobacco industries are the only ones that have been introduced to take advantage of the existence of a reservoir of over 15,000 women available for work, so that in 1931 only just over 6,000 women were associated with paid work.

d) Centres of Light Metal Manufacturing.

The towns in which the light metal manufacturing industries predominate, of which Darlaston is the most specialised example, are very strikingly concentrated in the "Black Country".

Towns in which sub-Order 9 is predominant are:

Darlaston	75.1	Wednesfield	49.2
Willenhall	68.7	Lye and Wollescote	48.0
Wednesbury	59.8	Smethwick	47.7
Quarry Bank	59.6	West Bromwich	46.8
Cosely	59.1	Dudley	37.7
Bilston	58.7	Wolverhampton	37.3
Rowley Regis	55.0	Braintree	36.1
Tipton	53.2	Thornaby on Tees	35.7
Short Heath	50.0	Dawley	34.6
		Walsall 28.6	

All but three of these 19 towns are in the Black Country. The exceptions were Dawley, on the nearby Shropshire coalfield, the small Exxex town of Braintree and finally Thornaby on Tees, where the chief activity in this sub-Order, structural engineering, is very different from the characteristic activities of the Black Country towns, which are the manufacture of bolts, nuts, rivets, and screws, locks and keys, hollow-ware and sheet metal work.

To the above group may be added Redditch, somewhat apart from the "Black Country". The development of the manufacture of needles and fish-hooks has made it the only town in which sub-Order 9 is dominant.

The/

The high proportion of the workers employed in the light metal manufacturing industries in the "Black Country" towns is not due to the size of the individual works, as so many of the other specialisations are. In this region division of labour and specialisation have been pushed to such an extent that many of the individual works perform only one process or produce only one small component of the product that is finally marketed. Such specialisations have only been possible in relation to the complementary activities of the rest of the district, and consequently although the district has no natural advantages of critical significance in comparison with other parts of the country, it has acquired characteristics which increasingly favour and encourage the further development of the local specialisation, and make the district the most attractive site for any similar new industries.

The high degree of dependence of these towns on the light metal manufacturing industries, the large proportion of women employed in such industries (37% of the number of men) and an unemployment rate lower than the average for th metallurgical industries (19.3% of 25.8%) account for the high proportions of the workers employed in Order VI in the "Black Country" towns in comparison with the proportion employed in other towns that are equally dependent on metallurgical industries.

The figures already given for Darlaston are characteristic of the towns of this group.

SUMMARY.

The metallurgical and engineering industries supply machinery for other manufacturing industries, but do not depend on the latter for any of their own supplies. Their raw materials are drawn either direct from primary produces or from other branches of the metallurgical industries. Consequently there is an incentive for some branches of the metal industries to be grouped together, and in some cases for them to group themselves near the sources of their raw material, but even in the latter case the proportion of the workers engaged in primary production is generally small. In so far as the industry is supplied from local sources this is a reflection of the fact that comparatively few workers can provide enough fuel and ore to maintain manufacturing industries employing much larger numbers. Similarly, within the metallurgical industry, the number of people employed in smelting and the cruder forms of production are far fewer than those employed in working up their produce into the more complicated forms of manufacture. On the other hand there is no incentive to establish other manufacturing industries in the same towns as the metallurgical industries since the latter provide neither raw material nor a market for other manufacturers.

and their competition for potential labour is an adverse factor to industries employing men. Such are the factors that have led to thegrowth of specialised metallurgical centres and which tend to encourage that specialisation and to discourage some forms of possible diversification of activity.

The high degree of dependence of such specialised towns on their main industry is however no indication of their actual importance as metallurgical centres. The following list gives the towns with more than 20,000 workers associate with metallurgy, and also theproportion that these workers bear to the total labour force in the town.

Greater London	345,933	8.2%
Birmingham	198,425	39.5
Sheffield	98,981	37.9
Manchester	52,789	11.2
Coventry	44,629	51.0
Leeds	31,739	10.8
Liverpool	30,630	7.0
Newcastle	30,243	17.1
Wolverhampton	25,877	37.3
Middlesborough	21,440	30.4
Smethwick	20,593	47.7
Sunderland	20,231	12.4

It will be noticed that in addition to towns famous for their metal industries, such as Birmingham and Sheffield, it also includes the chief regional centres such as London, Manchester and Liverpool.

2 Textiles Manufacturing Towns.

The textile industries differ in many ways from the metallurgical industries. Favourable conditions for the expansion of the textile industries can lead to the same degree of specialisation as in the case of the metallurgical industries, but a textile industry of any size offers a considerable market for textile machinery and hence provides conditions favourable for the development of a specialised engineering industry. In the smaller textile manufacturing towns this is confined chiefly to repairs but in the larger towns it attains considerable proportions as a manufacturing industry and consequently tends to reduce the relative importance of the textile industry in relation to the total amount of employment available. This tends to keep the proportion of the workers employed in the main industry in the larger textile manufacturing towns lower than in metallurgical centres of similar size.

In 1931 there were 495,311 men associated with the textile industries;m 408,530 were employe d and 86,781 unemployed, so that the average rate of male unemployment was 21.3%. The number of women associated with the Order was 690,467 or 39% larger than the number of men.

The Urban district with the largest proportion of its workers employed in the textile industries was Marsden (5,700) a small woollen manufacturing town in the upper part of the Colne Valley, south west of Huddersfield in the West Riding.

Marsden has already been described as the most specialised manufacturing town, with 97% of its population dependent on manufacturing industries. There were 1,334 men and 977 women employed in the textile industries and these 2,306 textile workers made up 76.1% of the workers. The relation between the diagram for Marsden and that for a completely specialised textile manufacturing town is shown below. Marsden differs only in having 2.6% of its workers employed in minor industries, 1.5% in primary production and 1.2% in metallurgical industries.

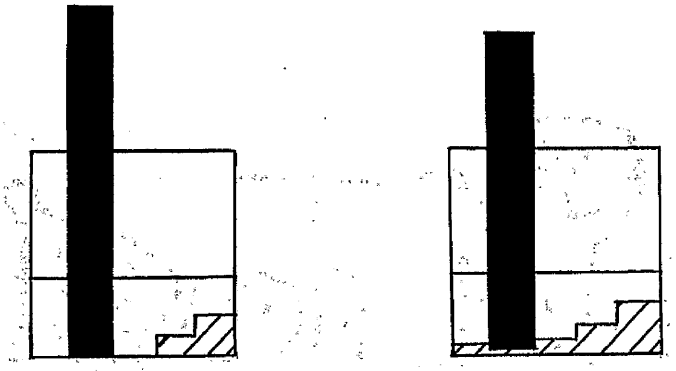
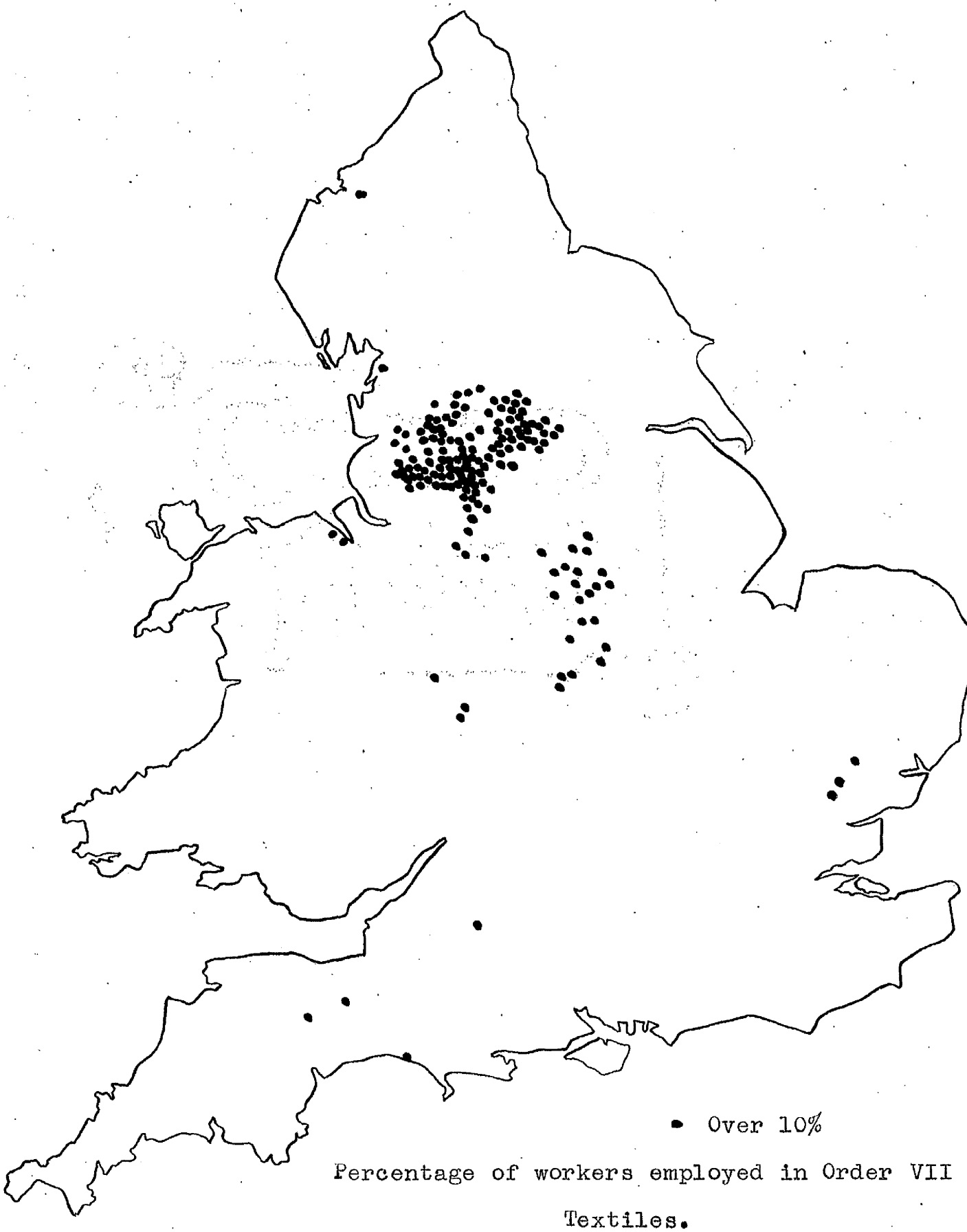


Fig.75.

The 1,334 men employed in the textile industries were sufficient to support 5,300 people or 92.5% of the population.

In spite of a rate of unemployment above the average there were 160 Urban Districts in which over 10% of the workers were employed in the textile industries and of these 35 had over 50% of their workers employed in the Order. All these 160 towns are shown on the map (Fig. 76). The most striking feature is that over half of these towns are in a restricted area in South Lancashire and the neighbouring

parts/



Percentage of workers employed in Order VII Textiles.

Fig. 76.

parts of the adjacent counties and almost another quarter of them are in a restricted part of the West Riding. Only three towns outside these areas have more than 50% of their workers employed in the textile industry; Leek in North Staffordshire, Flint in North Wales and Hinckley in Leicestershire.

The features of the distribution become more understandable if we separate the different activities included in the Order.

The following are the chief sub-Orders recognised by the Census:

Sub-Order 1 Cotton.
Sub-Order 2 Wool Worsted and Shoddy.
Sub-Order 3 Silk, Natural and Artificial.
Sub-Order 4 Flax, Hemp and Jute.
Sub-Order 5 Mixed Fibres.
Sub-Order 6 Miscellaneous products.
Sub-Order 7 Textile Dyeing, Printing, Bleaching Calendering, Finishing.

The labour statistics are as shown below:

	(1)	(2)	(3)	(4)	(5)	(6)
1.	162,094	49,717	211,811	30.7	359,344	169%
2.	87,558	12,242	99,800	14.0	128,256	128%
3.	25,650	6,415	32,065	25.0	38,338	119%
4.	1,140	212	1,352	18.6	1,431	106%
5.	5,528	863	6,391	15.6	3,604	57%
6.	56,843	6,343	63,186	11.2	136,937	216%
7.	69,717	10,989	80,806	15.8	22,557	28%

1) Men employed.
2) Unemployed men associated with the sub-Order.
3) Total men.
4) Unemployed men as a percentage of employed men.
5) Number of women associated with the sub-Order.
6) Number of women as a percentage of the number of men associated with the sub-Order.

Several interesting facts are shown by the above

table/

table. In order of town-building capacity, i.e. the number of men associated with the industry, the cotton industry is by far the most important section, the woollen industry is rather less than half as important and is followed fairly closely by the finishing trades, and the knitwear industry (miscellaneous products). The silk industry (including artificial silk) is of moderate importance, but neither the linen industry nor the jute industry is of any importance in England or Wales, although there are well-known specialised centres in other parts of the United Kingdom.

One significant characteristic of the textile industries is the large number of women associated with them. It has been pointed out that in the whole Order the number of women exceeds the number of men by 39%, there are, however, significant differences in the different sub-Orders. The finishing trades are operated mainly by men; and whilst women are only 28% more numerous than men in the woollen industry, they are 70% more numerous than men in the cotton industry; a fact which is reflected in the higher proportion of the female population associated with industry in the specialised cotton manufacturing towns than in the specialised woollen manufacturing towns. The proportion is still higher in the weaving section of the cotton industry, in which the number of omen employed was almost double the number of men (83% in excess). Even the latter figure is considerably exceeded in the knitwear industry, in which the number of women employed

was over twice as great as the number of men.

This very high proportion of female employees is of significance in the location and development of these industries. They cannot develop indefinitely by themselves, since the associated growth of population does not provide a sufficient increase of female labour. Thus they can only thrive in association with industries which employ sufficient men to maintain a large enough additional population. to provide the necessary reserve of female labour. This limitation was felt by the cotton weaving industry at a critical stage of its expansion, and is also no doubt of more significance than is generally realised in the location of the knitwear industry away from the main textile regions and in association w th the predominantly "masculine" traditional industries of the Midland towns.

Among the textile manufacturing towns there is very marked sp cialisation, which is almost complete, on one or other of the textile fibres; cotton, wool, silk, or artificial silk in England and Wales, jute and linen in other parts of the United Kingdom; there are other specialisations almost as complete, on particular products; piece goods, knitwear, carpets, lace or rope, and in the cotton industry a further specialisation, though much less complete, on particular processes, spinning or weaving, (these are not distinguished in the smaller towns) or some of the finishing processes (bleaching, dyeing etc.)
The most specialised towns and the percentage of their workers employed in the dominant activity are given in the following list.

Specialised Textile Manufacturing Towns.

Woollen industry	Marsden 74.8%
Cotton industry	Barnoldswick 72.2%
Artificial Silk	Flint 56.0%
Knitwear	Hinckley 52.0%
Carpets	Kidderminster 46.0%
Silk	Leek 34.6%
Finishing	Turton 29.6%
Rope	Bridport 25.4%
Lace	Tiverton 16.3%

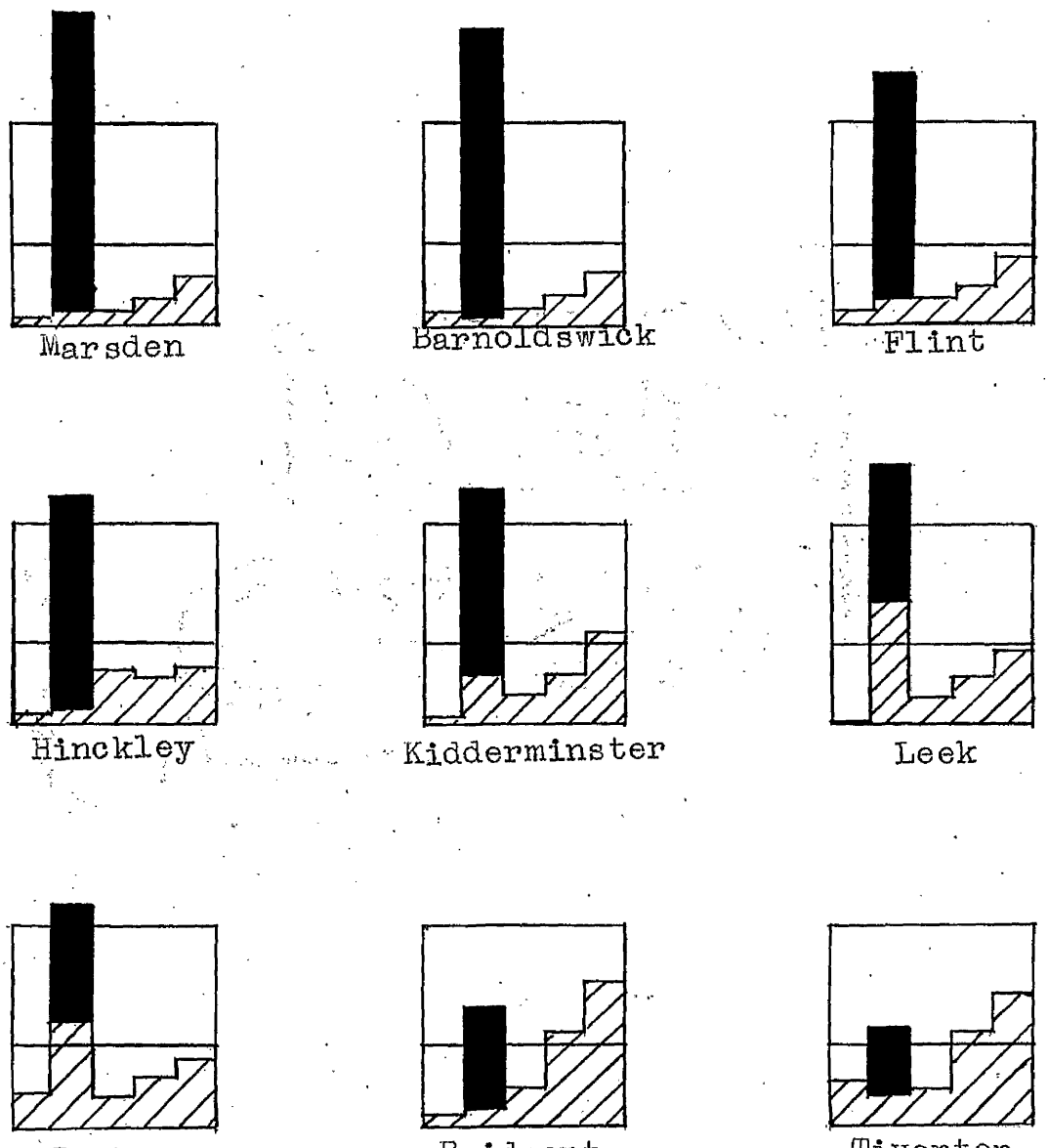


Fig. 77.

These specialisations have taken place on a regional basis; cotton manufacturing in the West Pennine area, woollen manufacturing in a small area of the West Riding and the knitwear industry in the N.E. Midlands.

a) The Cotton Manufacturing Towns.

In the West Pennine area all the specialised textile manufacturing towns except Golborne have cotton as their dominant textile. In a few of them, Turton, New Mills, Whitefield, and Prestwich, the finishing branches of the trade employ more people than the manufacturing processes. In Golborne the number of people employed in the silk industry slightly exceeds the number employed in the cotton industry.

Outside this area, which extends to Skipton, Todmorden and Hibden Bridge in the West Riding, Glossop and New Mills in Derbyshire, and Bollington in Cheshire there are only four specialised textile manufacturing towns in England and Wales in which the most important activity is cotton manufacturing; they are Meltham in the West Riding, Congleton and Biddulph on the Cheshire-Staffordshire border and Carlisle.

The Urban district with the largest proportion of its workers employed in the cotton industry was Barnoldswick (11,900) in the upper Colne Valley, just inside the West Riding of Yorkshire. There were 2,151 men and 2,101 women employed in the cotton industry and these 4,252 people made up 72.2% of the workers. The diagram is shown

... ~~from the standard~~

below, it will be seen that it differs from the standard only in having 2.6% of its workers employed in primary production 3.5% in miscellaneous industries and 1% in metallurgical industries.

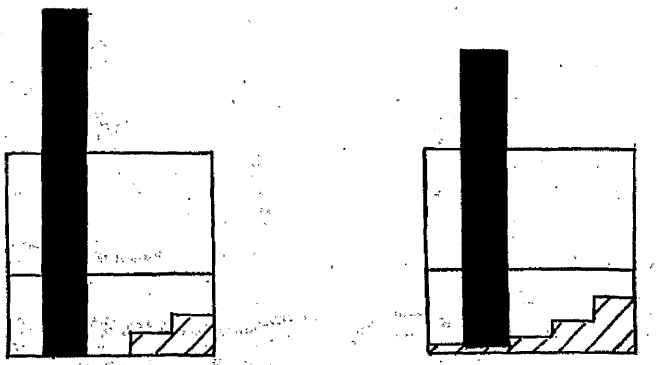


Fig.78.

There were in Barnoldswick 2,517 men employed in production (211 per 1,000 inhabitants) and 806 people employed in Regional Services (68 per 1,000 inhabitants). The male unemployment rate was 26.7%. From these ratios it would appear that Barnoldswick has no regional function. The production ratio, even after being adjusted to compensate for the high rate of unemployment is only 230 which is consistent with 90% of the population being dependent on productive activities.

The number of men employed in productive activities was sufficient, after compensation for the high rate of unemployment, to support 11,000 people or 93% of the population. The total number of men employed in productive industries other than cotton manufacturing was only 366, the two chief branches being farming (93 Men) and mining (59) men). These workers are sufficient to support 1,500 people/

people or 13% of the population, and if as seems likely, the whole of the rest of the population depends on the cotton industry, then 87% of the population depends on that cotton industry, although the number of men actually employed in the industry was only sufficient to support 8,600 people or 72% of the population and the remaining 1,300 people must be dependent on those workers in the cotton industry who were unemployed at the time of the census.

The number of women employed in the cotton industry was 98% of the number of men and the number of women associated with paid work was 3,354 or 54% of the female population. Both in its high rate of male unemployment and in the large proportion of the female population associated with paid work Barnoldswick is typical of the cotton manufacturing towns.

b) The Woollen Manufacturing Towns.

In the smaller West Riding textile manufacturing area all the specilised textile manufacturing towns except two have more people employed in the woollen industry than in any other sub-Order. This region stretches to Keighley in the Aire Valley and Otley in the Wharfe Valley, S.W. to Marsden in the Colne Valley and S.E. to Osset just north of the Calder Valley.

In Meltham the cotton industry is dominant, and in Hipperholm the miscellanous activities included in sub-Orders 5 and 6 employ slightly more people than the woollen industry. Outside this area there are only three specialised textile manufacturing towns in which the woollen industry

predominates, they are Mansfield Woodhouse, in Nottinghamshire, and two survivors of the West of England woollen industry, Trowbridge (Wilts) and Wellington (Somerset). In Marsden, 1,306 men and 945 women were employed in the woollen industry and these made up 74.8% of the number of workers. The proportion is shown in the following diagram:

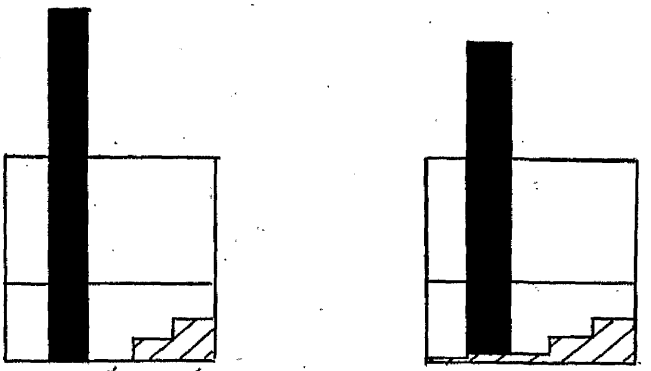


Fig. 79.

The number of men employed was sufficient to support 5,200 people or 91% of the population of Marsden. All other forms of production employed only 153 men; the largest groups being 40 farm workers, 36 metal workers and 28 men in other branches of the textile industry. Marsden is characteristic of the woollen manufacturing towns in having a comparatively low rate of unemployment, 9.7%, and in having a considerable proportion of the available female population associated with industry without reaching the proportions that are attained in the cotton weaving towns. Marsden is however exceptional in that its woollen industry employs fewer women than men; the women employees are only 72% as numerous as the men, in contrast to a 28% preponderance of women in the industry as a whole. Nevertheless

out/

out of 3,032 women in the town 1,203 (39.8%) were associated with paid work.

c) Towns Manufacturing Knitwear.

The knitwear industry which uses a variety of yarns employs almost as many people as the woollen industry and is the predominant activity in a group of 19 Urban Districts in the north east Midlands, spread over a fairly extensive area in Nottinghamshire, Derbyshire and Leicestershire, extending from The Matlocks and Sutton in Ashfield in the north to Hinckley and Wigston Magna in the south. The industry is not dominant in any town outside this area.

d) Other Textile Manufacturing Centres.

The silk industry is dominant in only 8 towns, and the artificial silk industry in two; and these are scattered over the country; there are three towns on the Essex-Suffolk border; two in the Midlands, and two on the Cheshire-Staffordshire border. The two towns in which the majority of textile workers are employed in artificial silk factories are Flint and Connah's Quay in North Wales.

The remaining towns are scattered and specialised on the less important textile manufactures; in Kidderminster and the nearby towns of Stourport and Bridgnorth most of the textile workers are employed in the carpet factories, in Tiverton in lace factories and in Bridport in ropeworks.

Numbers dependent on Textile Industries

The largest number of people associated with the textile industries in the cotton towns of Lancashire was

was 41,500 at Bolton, followed by 37,900 at Oldham, and 37,500 in Manchester (Salford has 14,000). Bolton had the largest number of men associated with the textile industries, 18,500. This number is sufficient to support a town of 67,000 inhabitants, (38% of the population of Bolton) but 2,900 of these men were associated with the finishing branches of the industry and the largest number of men employed in the cotton manufacturing industries alone was 16,000 in Oldham, sufficient to support 58,000 people. This is the largest number of people contributed by the cotton industry to the growth of any one town.

There were 62,000 people associated with the textile industries in Bradford, of whom 28,678 were men and these were sufficient to support 104,000 people (35% of the population of Bradford); 19,900 men were associated with the woollen industry and these were sufficient to support 72,500 people or 24.3% of the population of the town.

In Leicester out of 9,710 men associated with the textile industries, 7,200 were associated with the knitwear industry and these were sufficient to support 26,000 people. Associated with the same industry there were 20,620 women; 2,95 times as many women as men and a larger number than the total female population in a town of the size that could be supported by the industry alone.

Thus the largest number of people contributed to the growth of any one town by the textile industries was 104,000 at Bradford, the largest number contributed by the woollen industry alone was 72,500 by the cotton industry 58,000

58,000 people and by the knitwear industry 26,000 people.

Summary

The largest number of people supported by the textile industries in any one town was 98,000 and most of the specialised textile manufacturing towns were small whilst the large towns have other associated activities, either due to the existence of other industries, in many cases the manufacture of textile machinery, or to the fact that they act as regional centres for the more specialised manufacturing towns of the district.

The proportion of women employed in the textile industries is always high and in many of the textile manufacturing towns the proportion of the female population associated with paid work approaches the maximum for this country, about 55%. Those branches of the textile industry, such as cotton weaving and the knitwear industries, in which the number of women employed is considerably in excess of the number of men cannot be self-supporting but can only exist in towns in which another industry employing chiefly men helps to maintain a larger population and thus provide a larger reservoir of female labour than would be available if the town depended on the textile industries alone.

3) Centres of Minor Manufacturing Industries.

In 1931 there were 1,764,974 men associated with the minor manufacturing industries; 1,571,818 employed and 193,156 unemployed, so that the average rate of male unemployment was 12.2%. The number of women associated with these minor manufacturing industries was 1,133,367 of 64% of the number of men.

The minor manufacturing industries are classified into eight Orders, in some of which quite unrelated and dissimilar industries are grouped together; for example, brickmaking, glassmaking and pottery are all included in Order IV, and Order V includes the crushing of oilseeds and the refining of vegetable oils as well as the heavy chemical industry, moreover, these different activities within the Order are not distinguished in the statistics for the smaller towns.

The separate Orders employ far fewer people than either the metallurgical or the textile industries, but together they employ nearly as large a proportion of the workers as the two major industries; 15.4% of 16.4%. It is rare, however, except in some of the large cities, to find more than one of these minor industries employing a considerable number of people in a particular town; consequently when the diagram for any town shows a high proportion of the workers employed in minor manufacturing industries it will

usually/

usually be found that there is an exceptional specialisation on one of the industries or even on a very limited branch of one of them.

There were only 98 instances of one of the minor manufacturing industries employing over 10% of the workers in a town compared with 346 cases in which one of the major industries employs more than this percentage, and there was only one town in which one of the minor industries employed over 50% of the workers.

In general the minor manufacturing industries work very largely for the home market and tend to be carried on chiefly in, or near, the large cities, where the demand is concentrated and where there are the best facilities for distributing the products over a wide area. The numbers employed in these cities are however seldom sufficiently large to make up a considerable proportion of the workers.

The following table shows the number of towns in which over 10% of the workers were engaged in the particular Order.

Order.		(1)	(2)	(3)	(4)	(5)	(6)
IX	Clothing	34	Leeds	49,555	21.2	15,221	252,490
XII	Paper	16	Manchester	15,829	8.7	16,893	158,832
X	Food	15	Liverpool	32,206	4.1	9,895	173,493
IV	Pottery	15	Stoke	62,251	42.5	26,688	15,913
V	Chemicals	10	Liverpool	10,205	2.8	7,749	61,026
XIV	Other	4	Birmingham	17,642	3.4	9,655	98,384
XI	Furniture	2	Birmingham	11,300	2.2	8,731	93,803
VIII	Leather	1	Walsall	5,536	9.4	2,020	32,873

(1) Number of towns with over 10% of their workers in the Order.
(2) Town with the largest number of workers in the Order (excluding Greater London).
(3) Total number of workers associated with the Order in the town.
(4) Proportion of the workers in the town employed in the Order.
(5) Number of men employed in the Order in the town.
(6) Number of people associated with the Order in Greater London.

Order IV, is the only one in which the number of people associated with the Order in Greater London does not exceed that of any other town in the country, and this Order and Order VIII are the only two in which the most important centre outside Greater London is not one of the larger regional centres.

The different Orders show quite different characteristics, and it is remarkable what a high degree of specialisation is found within the individual Orders. In the following section the distribution of the towns specialised on the separate Orders is considered before the general distribution of the whole group.

There were no towns dependent to a considerable extent on tanning or the manufacture of leather goods other than shoes. There were only 58,000 men associated with the whole Order and if all these were in one town they would only support a population of 210,000. The largest number of men associated with the Order in any one town was 2,020 in Walsall, sufficient to support only 7,500 people and all the people employed in the Order there only made 9.4% of the workers. In Runcorn (1§100)

the number of people employed in the Order (727) made 10.7% of the workers, but the number of men employed (712) was only sufficient to support 2,850 people or 16% of the population.

Order XIV includes all manufacturing industries not classified in the other Orders. The most important are the rubber industry, the manufacture of scientific instruments, musical instruments, toys and sports requisites, brooms, and linoleum. Many of these industries are on a small scale and most of them are carried on chiefly in large towns, with London and Birmingham as the two most important centres. There were however four towns in which activities in this Order employed over 10% of the workers. In Alnwick (6,900) 278 people were employed in the manufacture of sports requisites and made 10.4% of the workers, and the same industry employed 1,028 people, or 10.4% of the workers in Redditch (19,300). In Leyland (10,600) 800 people employed in the rubber industry made 15.3% of the workers. In Lancaster, (43,400) the linoleum industry employed 3,519 people who made up 19.3% of the workers, and the 3,362 men employed in this industry were sufficient to support 13,400 people or 31% of the population

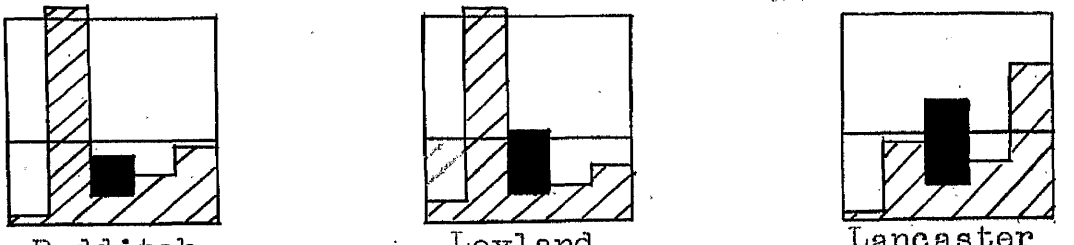


Fig 80

1) Wood and Furniture Manufacturing Centres.

Although Order XI is the fourth largest of the minor manufacturing industries there were only two towns in which the proportion of workers employed in the Order exceeded 10%. The common forms of the woodworking industry are carried on on a small scale in most towns. The furniture industry, like most other consumption industries that work chiefly for the home market, is carried on especially in or near to the main consuming centres and three of the four towns, outside Greater London, which have over 5,000 people associated with this industry are the three largest regional centres, Birmingham, Liverpool and Manchester, in each of which the Order employs less than 3% of the workers.

Birmingham	11,300	8,831	2,569	2.2%
Manchester	7,042	6,134	1,199	1.7%
Liverpool	7,040	6,295	745	1.7%
Chepping Wycombe	5,984	5,089	895	47.0% (employed only

1) Total number of workers associated with Order XI.
2) Number of men associated with Order XI.
3) Number of women associated with Order XI.
4) Proportion of workers employed in Order XI.

It will be seen that even in Birmingham the industry is not on a sufficiently large scale to support more than 32,000 people.

The two towns in which the number of workers employed in this Order is over 10% of the total were Stevenage (6,000), 11.3%, and Chepping Wycombe (28,000), 47%.

In the former case the Order employed 268 people and

only in so small a town would such a number represented any significant proportion of the total workers. The percentage figure is significant however in showing that, small as the industry is, it is far larger than normal in a town of this size.

Chepping Wycombe (28,000) presents an example, unique in this country, of a specialised furniture manufacturing town. There were 5,974 people employed in the Order, 47% of the total.

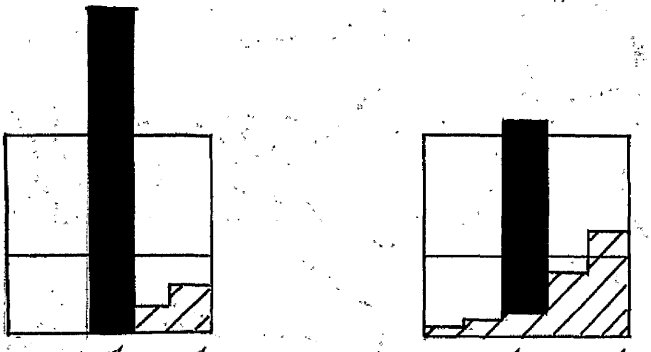


Fig. 81.

They consisted of 5,089 men and 895 women and 4,976 of the men were employed in manufacturing furniture. This industry alone is sufficiently developed to support a town of 20,000 inhabitants (72% of the population) and only the remaining 8,000 are dependent on other factors. Whatever the historical or geographical basis of this industry there is no doubt that proximity to London has been an important factor in encouraging expansion to the present size.

ii) Specialised Chemical Manufacturing Towns.

Although this Order has fewer people associated with it than the Wood and Furniture industries (164,000 men and 53,000 women) there are ten towns with over 10% of their workers employed in it. This reflects a fundamental difference between the chemical industry proper, with which 79,000 men and 25,000 women were associated, and the furniture industry. As has been pointed out the latter is attracted to the chief centres of consumption, and it is carried on in the heart of large towns. The chemical industry on the other hand is "centrifugal", for two main reasons. Firstly the manufacturing units cover a large area of land and employ large numbers of workers. Cheaper land and greater freedom in layout is obtainable on the margins of towns than in the centre and on the margins of small towns rather than large ones. When such a large industry is added to the activities of a small town the workers in it make up a considerable proportion of the whole. The arrangement of the specialised towns also shows that the industry has been built up in relation to the sources of its two chief raw materials, salt and coal.

On the other hand the industries concerned with vegetable oils, and the soap and paint industries which use vegetable oils as raw materials, all of which are included in this Order, have been set up chiefly in the neighbourhood of the ports through which the oilseeds are imported.

There were three towns outside Greater London with over 5,000 people associated with the Order, and they were the three chief ports.

	(1)	(2)	(3)	(4)
Liverpool	10,205	7,749	2,456	2.8%
Hull	8,698	6,706	1,992	6.3%
Manchester	6,433	4,191	1,514	1.6%

1) Total number of workers associated with Order V.
2) Number ofmen associated with Order V.
3) Number of women associated with Order V.
4) Percentage of workers employed in Order V.

In Liverpool the industry is sufficiently large to support 28,000 people. The most important single branch is the crushing of oilseeds and refining of vegetable oils w which employed 3,563 people. Paint-making was second in importance and employed 1,149 people but the heavy chemical industry employed only 207.

There were ten towns with over 10% of their workers engaged in the Order.

		Popn.
Billingham	47.3%	18,000
Bebington and Bromborough	36.9%	27,000
Widnes	29.8%	41,000
Northwich	29.6%	19,000
Runcorn	18.1%	18,000
Irlam	17.2%	13,000
Middlewich	14.9%	5,000
Selby	13.8%	10,000
Stockton on Tees	11.4%	68,000
Thornton Cleveleys	11.3%	10,000

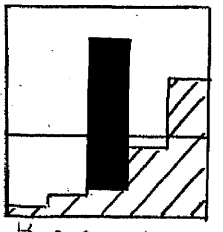
The Urban district of Bebington and Bromborough, which includes Port Sunlight, is not concerned with the heavy chemical industry. Of the 3,908 people employed

Percentage of workers employed in Order V.

Chemicals, Oils, etc..

Fig. 82.

in the Order, 3,756 were employed in the manufacture of soap, candles and glycerine. These made up 35.2% of the workers.



Bebington & Bromborough
Fig.83.

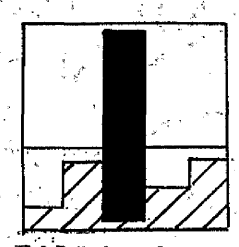
Bebington and Bromborough is an example of a specialised industrial suburb, which enjoys both the facilities for obtaining its raw materials from the oil manufacturing industries of the Merseyside ports and the advantage of the cheap land lying beyond their boundaries. The number of men employed in the manufacture of soap etc. (2,808) was capable of supporting about 11,200 people or 41.5% of the population.

The manufacture of vegetables oils and oil cake at Selby, which employs 450 men (compared with the 58 in the chemical industry), has grown up as an extension of the much larger similar industry in Hull.

The other specialised towns are concerned with the heavy chemical industry and with the exception of Thorton Cleveleys are located in relation to the salt fields of Cheshire and the lower Tees valley. Billingham, the most specialised of them, owes its character to the erection

there of a large plant designed to take advantage of the same general factors as had encourage the growth of a considerable chemical industry in the adjacent town of Stockton on Tees. The latter is the largest town with over 10% of its workers employed in the chemical industry. In 1931 thenumber of chemical workers resident in Stockton on Tees was sufficient to support about 12,600 people, or 18.5% of the population.

There were 2,652 men and 64 women employed in the chemical industry in Billingham and these made up 47.3% of the workers.



Billingham

Fig. 84.

In Billingham the Regional Services Ratio was 57 per1,000 inhabitants and the production ratio 221 per1,000 inhabitants with a male unemployment rate of 18.6%. Thus the town is entirely dependent on productive activities. The 2,652 men employed in the Chemical industry were sufficient to support 10,600 people or 59% of the populatior

iii) Towns with specialised manufactures of Bricks, Pottery and Glass.

This is the second smallest of the minor manufacturing Orders and had only 205,000 people associated with it; 157,000 men and 48,000 women. It is also the most varied of the Orders and includes three quite different industries. Nevertheless it supports two of the largest scale examples of specialised manufacturing towns apart from those concerned with the major industries. There were only two towns with over 5,000 workers associated with this Order.

	(1)	(2)	(3)	(4)
Stoke on Trent	62,251	26,688	35,563	42.5%
St Helens	13,028	11,000	2,028	28.8%

(a) Towns largely dependent on Pottery manufacture.

The number of men associated with the Order in Stoke on Trent (277,000) was sufficient to maintain an industrial town of 97,000 people or 35% of the population of the town. Practically all of the employed workers in the Order (22,268 men and 29,707 women) ~~and only~~ were employed in making earthenware, china and other form of pottery (19,855 men and 29,707 women) and only 2,000 men and 246 women were employed in making bricks and unglazed tiles.

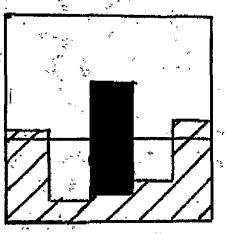
A similar specialisation is found in certain Urban districts adjacent to Stoke on Trent, which was itself formed by the amalgamation of five adjacent towns. Of the 15 urban districts with over 10% of the workers employed in Order IV the following are concerned chiefly with

		Popn.
Stoke on Trent	42.5%	277,000
Wolstanton United	31.4%	31,000
Swadlincote Dist.	30.3%	20,000
Newcastle under Lyme	20.5%	23,000
Kidsgrove	17.6%	10,000
Audley	13.0%	14,000

With the exception of Swadlincote they are all in the immediate vicinity of Stoke on Trent.

b) A. Specialised Glassmaking Town

St Helens (107,000) has 13,028 people associated with this Order and 11,000 of them are men; a number sufficient to support an industrial town of 40,000 inhabitants or 37.5% of the actual population. There were 9,260 men and 1811 women employed in the manufacture of glass and glass bottles. The latter 10,087 people made up 26.2% of the workers.



St. Helens

Fig.85.

The manufacture of glass and glass bottles is a highly technical industry ~~catering for a wides read activity~~ and is now controlled by a few firms. The conditions of manufacture are naturally favourable to concentrated production and St Helens, the place chosen for the concentration of a large part of the industry, has the advantages, which it shares with all the South Lancashire

Percentage of workers employed in Order IV

Bricks, Pottery and Glass.

Fig.86.

towns, of easy access to those of its raw materials provided by the Merseyside chemical industries, local fuel supplies and a large consuming area within easy reach. There is no other town in England and Wales with a comparable number or proportion of people engaged in the manufacture of Glass, although Greater London had a slightly larger number engaged in the manufacture of bottles.

c) Brickmaking Towns.

Seven of the eight other towns with over 10% of their workers employed in this Order are brickmaking centres.

		Popn.
Knottingley	42.2	6,800
Old Fletton	31.6	7,500
Whittlesey	22.0	8,000
Brierley Hill	18.6	14,000
Wenlock	18.0	14,000
Sittingbourne and Milton	16.8	20,000
Kempston	12.2	5,000
Bridgwater	11.0	17,000

Bricks, the standard building material of the parts of the country where there is no suitable building stone, are cheap to make and expensive to transport. There is a strong incentive to make them as near as possible to the place where they are to be used, and, since small deposits of suitable clay are widespread, small brick_ yards are also widely distributed over the country. Even in the largest brickfields the number of men employed is comparatively small, so it is only where an exceptionally/

exceptionally large scale brick industry has been built up in the neighbourhood of a small town that the workers exceed 10% of the total. Even the extensive brick fields of the Peterborough district do not employ 10% of the workers in the town itself, although this proportion is considerably exceeded in the small adjacent town of Old Fletton (7,500) where 873 men were employed in brickworks; sufficient to support 3,500 people or 46% of the population.

It isnot possible to tell from the Census which branch or branches of the Order are carried on at Knottingley but enough men are employed in it to support 3,500 people or 51% of the population.

Towns with specialised Food Manufacturing

This is the second largest Order of the minor manufacturing industries and has 517,000 people associated with it; 225,000 women and 292,000 men. There were 15 towns in which over 10% of the workers were employed in this Order.

The component parts of this Order have quite different distributions; tobacco manufacturing is carried on in comparatively few places and on a fairly large scale, whilst the food industries are widely and evenly distributed over the country, with a tendency to slightly more than proportionate developments in the larger towns. The brewing industry is intermediate in character; brewing is widely carried on in market towns but there is an increasing tendency for the bigger breweries to acquire larger share of the market.

The following thirteen towns excluding Greater London had over 5,000 people associated with this Order.

	(1)	(2)	(3)	(4)
Liverpool	32,206	16,893	15,313	8.7%
Bristol	22,150	11,266	10,884	12.5%
Birmingham	20,487	11,809	8,678	4.3%
Manchester	12,875	7,396	5,479	3.3%
Nottingham	8,290	4,546	3,744	6.3%
Hull	7,999	5,004	2,991	5.7%
York	7,496	3,780	3,716	18.5%
Leeds	6,972	4,682	2,310	2.8%
Reading	6,774	4,195	2,579	15.2%
Sheffield	6,579	3,686	2,911	2.9%
Burton upon Trent	6,068	5,616	452	27.0
Cardiff	5,271	3,357	1,914	5.5%
Newcastle	5,124	2,609	2,515	4.4%

(1) Total workers associated with OrderX.
(2) Men associated with Order X.
(3) Women associated with Order X.
(4) Percentage of workers employed in Order X.

All of these are large towns, but some of them have a larger number of people employed than can be related to the immediately dependent market. In Liverpool the industry is sufficientlylarge to support a population of 61,000 people. Chewing and the manufacture of food have been carried on in all parts of the country, from time immemorial and it is only slowly and to a limited extent that changed conditions of manufacture and transport have induced any exceptional concentrations. The tobacco industry on the other hand, using an exotic raw material, has been introduced into comparatively few places and thenumber of people employed is small (51,000; 19,000 men, 32,000 women). Outside Greater London the chief towns are Bristol (4,303 men and 5,955 women) Nottingham (1,937 men and 3,312 women) and Liverpool (1,442 men and 3,757 women). Two of these towns are the ports which had the chief trading connections with the continent from which tobacco was first obtained. It is inconceivable that the foundation and expansion of the tobacco industry at Nottingham are related to any geographical peculiarity of the site; but in consequence of the existence of this industry Order X affords employment to a larger proportion of workers in Nottingham than in some more populous towns.

Most branches of the food industry depend on home supplies/

supplies of raw material and are distributed in close relation to the population they serve. Some branches however are dependent upon exotic raw materials and the one that provides the closest parallel to the tobacco industry is the manufacture of cocoa and chocolate which employed 33,000 people (14,000 men and 19,000 women). Outside London there are only three important centres; Birmingham (3,536 men and 3,940 women), York (2,227 men and 3,227 women) and Bristol (1,838 men and 2,881 women). Only one of these is a port with trading connections to countries supplying the raw material; the other two are destitute of such a geographical connection or any other special geographical advantages for the industry.

The sugar refining industry, smaller in scale, (12,100 men and 2,300 women) is even more restricted in its distribution. Outside London, Liverpool (3,019 men and 605 women) is the only town in which it is carried on on a large scale.

There are other food industries which although they use indigenous raw materials have come to depend more and more on imported supplies; the chief is, of course, the milling industry which is now more important in the ports than in the towns of the grain growing districts. Outside London the chief towns are Liverpool (1,523 men and247 women) Hull (1,304 men and 133 women) and Bristol (837 men and 238 women).

The pre-eminence of Liverpool and Bristol in the

manufactures included under Order X is accounted for by the fact that in addition to being large regional centres with the common food industries they are also ports in which not merely the modern grain milling industry but also manufactures baded on rarer and more exotic imports have developed to a much greater extent than in any other town outside London; sugar and tobacco in the case of Liverpool, tobacco and cocoa in the case of Bristol.

As has been pointed out above there has not been a very marked tendency to specialisation in connection with this ubiquitous Order. The following are the 15 towns in which more than 10% of the workers are employed in the Order;

		Popn,
Burton upon Trent	27.0%	50,000
York	18.5%	85,000
Reading	15.2%	97,000
Bristol	12.5%	397,000
Alton	12.4%	6,000
Carlisle	12.1%	57,000
Mangotsfield	12.0%	11,000
Ware	12.0%	6,000
Trowbridge	11.4%	12,000
Irlam	10.8%	13,000
Boston	10.9%	17,000
Middlewich	10.3%	5,000
Pontefract	10.3%	19,000
Newark	10.2%	18,000
Golborne	10.0%	7,000

It will be seen from the map that these are scattered over the country and show no tendency to any regional concentration. Of the larger towns York and Bristol have already been dealt with, the other two with more than 50,000 inhabitants, Reading and Carlisle, both owe the high proportion of their workers in this Order to a highly developed biscuit making industry which employed 2,377 men

Percentage of workers employed in Order X.

Food, Drink and Tobacco.

Fig. 87.

and 2,110 women in Reading and 613 men and 1,310 women in Carlisle.

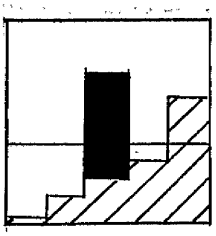
Among the smaller towns a variety of factors are involved. Most of them are small market towns in which milling and brewing are carried on, (Alton, Ware, and Newark) some have additional activities, bacon curing at Trowbridge, vegetable and fruit canning at Boston, sweetmaking at Pontefract; others, such as Mangotsfield, Irlam and Golborne, are suburbs of larger centres.

The most notable feature is however that none of these towns except Burton depends to any significant extent on the industries of this Order. The number of men associated with the Order in York is only sufficient to support 13,800 people or 16% of the population.

The town with the largest proportion of its workers associated with this order wasBurton upon Trent (50,000) where there were 5,381 people employed in the Order and these made 27% of the workers. Burton has specialized on ~~the~~ brewing with which 5,247 men were associated, compared with 323 men associated with the food industries. The relative importance of the different factors that have contributed to this specialisation are difficult to assess. There is not doubt that the water of the Burton district is naturally suitable for the brewing of ales, but it is by no means unique or inimitable in its qualities. The growth of the Burton brewing industry to its pre-eminence is merely another example of the introduction of large scale manufacture associated with an increasingly complex

technique of production which has made a wider and wider gap between the traditional small scale methods and those adopted by the most efficient firms; the changes have been accompanied by a progressive increase in the range of profitable distribution and by the application of nation-wide advertising to the detriment of the local producers.

The relative importance of the brewing industry, in the economy of Burton, and the place of Burton in relation to the whole brewing industry must not be over-estimated. The number ofmen employed in the brewing industry in Burton (4,410) was less than a twelfth of the total in England and Wales (59,638), and although the proportion of workers employed in this Order was the highest in the country, that proportion was only 27%, a far lower percentage than is found in the most specialised town in any other manufacturing Order except the Leather industry.



Burton
Fig. 85.

Burton is not so remarkable for the degree of its specialisation as for its uniqueness in this respect since only in a few small market towns, such as Alton (6,000) does brewing employ 10% of the workers.

The total number of men associated with the manufacture of Drink is 5,247, a number sufficient to support 19,000 people, or only 38% of the population of Burton.

v) Printing and Papermaking Centres.

There are 293,000 men associated with this Order, and 152,000 women; of these only 33,000 men and 11,000 women are employed in papermaking. This Order shows both a tendency to concentrate into the larger centres and also to be carried on in small centres, where it employs a considerable proportion of the workers.

There are six towns outside Greater London with over 5,000 people associated with the Order and these are the six leading regional centres.

	(1)	(2)	(3)	(4)
Manchester	15,029	9,895	5,934	4.1%
Birmingham	12,491	6,691	5,800	2.6%
Bristol	10,427	5,906	4,521	5.7%
Leeds	9,187	5,956	3,231	3.7%
Liverpool	9,137	5,050	4,087	2.5%
Salford	5,056	2,731	2,325	4.4%

(1) Total workers associated with Order XI.
(2) Men associated with Order XI.
(3) Women associated with Order XI.
(4) Percentage of workers employed in Order XI.

In each of these towns the proportion of workers employed in Order XI is less than 6% and even at Manchester the industry is not large enough to support more than 36,000 people. In none of these towns is papermaking of much importance; newspaper publishing, general printing, and the manufacture of boxes, paper bags and stationery are the chief activities.

The following 15 towns have over 10% of their workers in the Order:

		Popn.
Hemel Hempstead	35.2%	15,000
Swanscombe	27.8%	9,000
Sittingbourne and Milton	26.9%	20,000
Northfleet	25.3%	16,000

Percentage of workers employed in Order XII.

Paper Making and Printing.
Fig. 86.

		Popn.
Dunstable	23.1%	9,000
Aylesbury	17.7%	13,000
Beccles	16.0%	7,000
Frome	14.8%	11,000
Purfleet	14.0%	9,000
Gravesend	12.4%	35,000
Wolverton	12.1%	13,000
Maidstone	11.0%	42,000
Watford	11.2%	87,000
Tonbridge	10.7%	16,000
Otley	10.2%	11,000

It is remarkable that fifteen towns should have over 10% of their workers engaged in so small an order. It is due to the operation of two factors that are reflected in the distribution of the towns. The paper manufacturing industry depends on bulky imported raw materials and has been established mainly on the shores of the Thames estuary especially in the Gravesend, Northfleet, Swanscombe district and on the opposite side of the river at Purfleet. In contrast to this the printing industry, which makes no peculiar demands on its site, is one of the first industries in which a policy of decentralisation has been consciously adopted, chiefly to take advantage of a zoned system of wage rates which favours country districts and smaller towns. In consequence of this considerable printing industries have been set up in small country towns within easy distance of London, especially to the northwest; Dunstable, Aylesbury, Wolverton, and Watford.

The most specialised town of the group, Hemel Hempstead (15,000) with 35.2% of its workers employed in the group, 1,461 men and 1,020 women, does not depend on the printing industry but chiefly on a large stationery manufacturing

firm.

vi) Clothing Manufacturing Centres.

Order IX is the most important of the Orders of minor manufacturing industries. It has the largest number of people associated with it (833,000 people; 318,000 men and 515,000 women). There were 34 towns with over 10% of their workers employed in this Order and there are several examples of very marked specialisation.

The Order includes very varied activities. The largest single branch was tailoring in which 264,000 people were employed (110,000 men and 153,000 women). The next largest group includes all the other forms of textile clothing, especially dresses, shirts and underclothing in the manufacture of which 228,000 people were employed (17,000 men and 211,000 women). There is an extraordinary preponderance of women in this branch of the industry for they were over twelve times as numerous as the men. The third large group was engaged in the manufacture of boots and shoes (192,000 people; 139,000 men and 53,000 women). The minor branches of the clothing industries employed comparatively few people but they are of interest for the very striking way in which they are concentrated in particular towns. The millinery industry employed 27,000 people (2,000 men and 25,000 women) and over half of them lived in Greater London. The manufacture of felt hats employed 13,000 people, (7,400 men and 6,000 women) nearly 10,000 of whom lived in the neighbourhood of Stockport. The

making of straw hats employed 12,000 people (3,700 men and 8,500 women) and was virtually confined to Luton (3,168 men and 6,716 women). Glovemaking employed 12,000 people (4,300 men and 7,600 women) and was important only in Somerset (1,519 men and 2,691 women), especially at Yeovil and Taunton, and in Worcestershire (518 men and 1,219 women), especially in Worcester itself.

The following thirteen towns outside Great London have over 5,000 workers associated with this Order;

	(1)	(2)	(3)	(4)
Leeds	49,555	15,221	34,334	21.2%
Manchester	45,776	11,472	34,304	12.1%
Leicester	25,507	14,818	10,689	19.2%
Northampton	18,098	10,337	7,741	37.4%
Norwich	13,973	7,441	6,533	22.5%
Birmingham	13,937	3,911	10,026	2.9%
Luton	12,736	4,637	8,099	34.8%
Salford	12,445	3,511	8,934	11.1%
Liverpool	12,202	4,379	7,823	3.4%
Bristol	10,142	4,175	5,967	5.5%
Nottingham	7,588	1,628	5,959	6.0%
Kettering	7,442	4,023	3,419	48.1% (employed only)
Stockport	5,842	3,003	2,839	9.0%

1) Total workers associated with Order IX.
2) Men associated with Order IX.
3) Women associated with Order IX.
4) Percentage of workers employed in Order IX.

These towns owe their prominence to the development of different branches of the Order; Luton and Stockport to two different branches of the hat making industry, straw hats at the former and felt hats at the latter; Kettering, Norwich, Northampton and Leicester are the four most important centres of the boot and shoe industry.

The remaining towns are concerned chiefly with the

clothing industry in the restricted sense. The above table shows that in all of them the number of women associated with the industry was greater than the number of men, in contrast to the conditions in the boot making centres; at Leeds there were over twice as many women as men employed in the Order, and in Manchester over three times as many. This need for a large supply of female labour, which is characteristic of the tailoring, dress, shirt and underclothing industries, makes them parasitic on other activities; they can obtain the necessary labour supply only when they are set up in towns where other activities have already collected sufficient population to provide a large reservoir of female labour which they do not themselves fully use. For example, the clothing industry of Leeds has sufficient men associated with it to maintain a town of about 55,000 people, but such a town could not provide 34,000 women. Thus although clothing industries are found in association with both the textile manufacturing districts, they are not found in towns where the textile industry is predominant, for the textile industries themselves normally employ ~~all~~ most of the female labour available in such towns. Such industries have however been set up in the two regional centres of the textile districts; the tailoring industry, which uses woollen materials, in Leeds and the dress and shirt making industries, which use cotton materials, in Manchester. These centres have three advantages; an adequate supply of female labour, considerable local

demand and close contact with the manufacturers of a wide variety of materials. The first two factors alone have been sufficient to support the growth of considerable clothing industries in other large regional centres such as Birmingham, Liverpool and Bristol.

The clothing industry has been one of the most recent to adopt the technique of mass production and it is still in the stage of expansion, and the sites of new factories have often been chosen to take advantage of an unused reserve of female labour such as is to be found in mining, engineering and metallurgical towns. In 1931 Crewe had a clothing industry which employed 1,652 women and only 291 men; the women outnumbered the men by over 5:1.

The following 34 towns had over 10% of their workers employed in Order IX.

		Popn.
Rushden	66.5	14,000
Kettering	48.1	31,000
Hebden Bridge	42.5	6,000
Wellingborough	38.6	21,000
Northampton	37.4	92,000
Denton	37.3	17,000
Luton	34.8	69,000
Market Harborough	32.9	9,000
Nantwich	31.2	7,000
Kingswood	31.0	13,000
Bacup	30.0	21,000
Rawtenstall	24.3	29,000
Stone	23.5	6,000
Norwich	22.5	126,000
Leeds	21.2	483,000
Yeovil	20.2	19,000
Stafford	19.7	29,000
Leicester	19.2	239,000
Skelmersdale	17.5	6,000
Mangotsfield	17.4	11,000
Wigston Magna	16.6	11,000
Kendal	15.0	16,000
Taunton	14.4	25,000
Stroud	14.3	8,000

Percentage of workers employed in Order IX.

Clothing (not knitted).

Fig. 87

		Popn.
Bredbury and Romiley	12.9	11,000
Dunstable	12.8	9,000
Manchester	12.1	766,000
Bridgwater	12.0	17,000
Worcester	11.6	51,000
Salford	11.1	223,000
Shepshed	11.0	6,000
Rothwell	11.0	16,000
Crewe	10.6	46,000
Hinckley	10.0	16,000

These towns are scattered fairly widely over the country. Several of them are moderate-sized market towns in which a boot or glove-making industry still persists on a small scale; Yeovil and Taunton, Stone, Stafford and Kendal are of this type.

a) Bootmaking Towns.

There is also a marked regional concentration of the boot industry in which the counties of Leicester and Northampton, which contained 72,000 of the 185,000 people employed in boot industry; that is 39% of the total. To prove or disprove the improbable thesis that this concentration is based on specific geographical advantages would require detailed research but it appears probable that such advantages if they existed at all, were only effective before the era of large scale industrialisation. That they are not confined to these counties is proved by existence of many small bootmaking towns in other counties, and of the large scale industry of Norwich. The boot-making industry shows in a striking manner certain features which have been common to a variety of light industries. Various handicrafts which were formerly

fairly widespread over the country have steadily been transformed into incredibly complicated technical processes involving the use of batteries of highly specialised machinery. This transformation was most rapid in the larger towns in which the industry was carried on where it was facilitated by the greater variety of experience and endeavour available, including specialised engineering skill, and greater facilities for raising new capital. The technical progress gave such centres increased advantages over the smaller centres, and every step forward increased the dufficulties in the way of and correspondingly decreased the probability of, the foundation of competing industries in new centres. On the other hand the advantages of decentralisation and the possibility of tapping a new labour supply have caused the modern industry to spread from the larger centres to adjacent small towns, which are now more dependent on the industry than the larger "parent" centre.

The most important single centre of the bootmaking industry was Leicester (239,000) where the 12,160 men and 7,434 women employed made up 19.2% of the workers. The 14,818 men associated with the Order were sufficient to support 54,000 people, only 22.5% of thepopulation of Leicester, so boot-making has played only a secondary part in the growth of the town.

The second most important town and the most specialised of the large towns was Northampton (92,000) where 16,327 people employed in the bootmaking industry made

37.4% of the workers. The numberof men associated with the Order was sufficiently large to support an industrial town of 43,000 people or 47% of the population but although bootmaking is the largest industrial interest of Northampton it has not dominated over all the other factors in the growth of the town.

The number of workers was smaller and the proportions employed in the order higher in the neighbouring small towns; Wellingborough (21, 000), 38.6%, Kettering (31,000), 48.5% and Rushden (14,250), 66.5%.

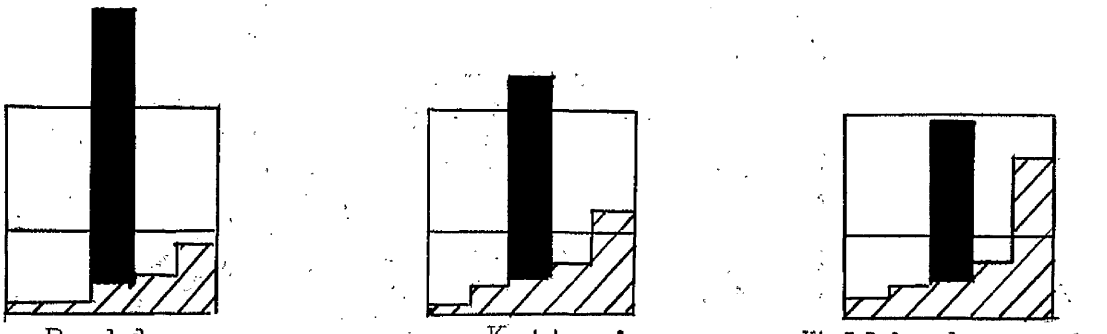


Fig.88.

Rushden is virtually dependent on this one industry. There were 2,924 men employed in the industry and 1,744 women, and this number of men is sufficient to support a town of 12,000 inhabitants or 84% of the population. The only other significant productive activities were tanning (122 men) farming (100 men) and metal work (100 men).

b) Towns with other Clothing Industries.

The distribution of many of the other smaller

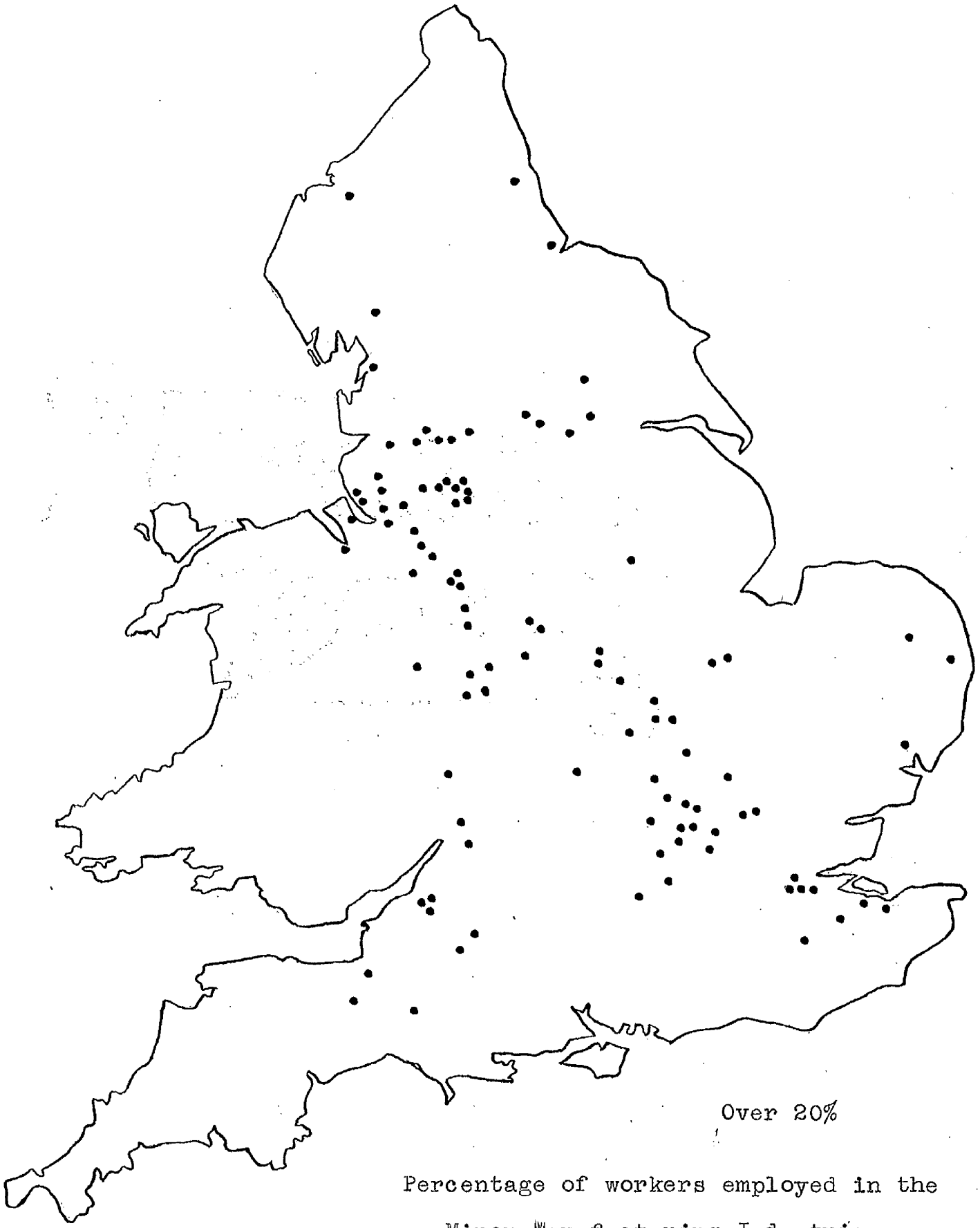
specialised towns will be seen to be related to their proximity to the larger centres; Denton (17,000) had even larger proportion of workers (37.3%) employed in the felt hat industry than Stockport; Kingswood and Mangotsfield Urban Districts on the edge of Bristol; Dunstable only fonr miles from Luton; the smäler towns of the Manchester-Stockport district, and Rothwell near Leeds.

The three neighbouring towns of Rawtenstall, Bacup and Hebden Bridge differ from the adjacent textile towns in having a considerable proportion of their workers employed in Order X although the Census statistics do not specify in which branch.

SUMMARY.

The map of all towns in which all the minor industries employed over 20% of the workers (Table 19) shows that they are scattered very widely and evenly all over the lowland parts of the country, with pronounced clusters in the vicinity of Manchester, Leeds and Birmingham. From this very widespread basis there arose certain local specialisations, and with the prevailing application of large scale methods and the resultant growth in size of the manufacturing units, these specialised industries have come to play a predominant part in particular towns, and also to control a considerable proportion of the total output of their particular speciality.

In a few cases the concentration is related th the



Percentage of workers employed in the Minor Manufacturing Industries.

Fig. 89.

existence of specific geographical advantages in the region in which it has taken place; as in the case of the concentration of the heavy chemical industries in the Merseyside and Tees-side in relation to the distribution of the two chief raw materials, salt and coal. The "Potteries" district undoubtedly has some natural advantages for that industry, although it is very doubtful if they are unique, and consequently it is probable that the unique development of the industry there is due to historical factors and to the momentum of the established industry.

Although there is a considerable concentration of shoe-making towns in the east Midlands, the existence of other towns, almost equally specialised, in other parts of the country clearly belies any suggestion of unique geographical advantages to account for this concentration, which is still more clearly a matter of history and momentum, with local expansion and imitation around the dominant centres.

The distribution of the specialised paper making and printing centres is clearly related to the chief market, London.

Apart from the Chemical, Pottery and Brickmaking industries in which the cost of raw materials bulks large, and the paper making industry which depends on bulky imported raw material, it seems that any accesible site in the English lowlands is suitable for large scale development of any of the minor industries in which labour costs

Represent a very large proportion of the total and power and transport costs are relatively unimportant.

General Summary : Industrial Towns.

The towns of Britain dependent on manufacturing industries fall into a few major types. Examples of towns that have grown up with the expansion of metal or textile industries, and are still dependent almost exclusively on those industries, are common. Examples of towns dependent to a similar degree on other industries are rare; nevertheless there is at least one example of a town showing a relatively high degree of specialisation in most of the minor manufacturing industries, and with the modern tendency for manufacturing units to employ large numbers of workers and for new works to be set up in relatively undeveloped localities or adjacent to small towns they are becoming more common.

Most of the highly specialised towns are in the smaller size groups. Some of them such as the specialised cotton, woollen and hardware manufacturing towns are merely single units in regions largely devoted to their predominant activity. Others, such as Rushden and Billingham, depend on an industry set up as an extension from a nearby larger centre, an industry which plays a relatively more important part in the life of the small town than in the larger centre. The greatest degree of specialisation and the largest number of specialised towns are to be found in connection with the two major industries.

Although many of these specialised industrial towns have grown up in relation to local supplies of coal it is comparatively rare to find mining and manufacturing associated on anything like equal terms in the same town, or to find mining towns and manufacturing towns intermixed. In the manufacturing towns miners, if present at all, generally form a very small proportion of the workers even in the case of metallurgical centres, to which a supply of fuel is of the greatest importance.

The following factors have brought about the cleavage of towns in type and distribution.

If a manufacturing industry founded in a mining centre is successful there is not such limit to its local expansion as is imposed by the physical limitations on mining. Even if the industry remained dependent in the supplies of fuel actually mined in the town the number of people employed in the industry would be vastly greater than the number employed in mining the coal, and theminers would form only a small proportion of the total workers.

In considering the present differences in distribution of the two types of town, it must be borne in mind that the area of maximum coal production has changed since the foundation of most of the manufacturing industries. The manufacturing towns of the coalfields are situated in the regions where coal production was at a maximum in the middle of last century, but the number of miners

employed in such areas is tending to decrease on account of the increasing exhaustion of the seams, whilst newer mining towns are growing on the deeper margins of the fields, and on the concealed coal deposits beyond the limit of the outcrop of the Coal Measures, but industry has not followed them. There are particularly clear examples of this on the Lancashire and Yorkshire coalfields, where the mining and manufacturing towns are not intermingled but in separate areas.

The few mining towns in which industries have begun to grow but have not outstripped mining in importance are generally of intermediate size, slightly larger than the pure mining towns, but much smaller than the great manufacturing towns. Several of them are in the Nottinghamshire coalfield, where the knitwear industry, employing a large preponderance of women, in its expansion from Nottingham has been attracted by the reserve of labour offered by some of the larger mining towns of that area but has not grown to sufficient size to outstrip the mining industry.

The General Distribution of Industrial Towns.

After analysing the distribution of the towns specialised on the individual manufacturing industries we are in a better position to understand the map showing the distribution of those towns in which over 50% of the population was dependent on manufacturing industries.

It shows the following general features:

1) The absence of industrial towns in the more remote parts of the country; the Northern Uplands, the Welsh Uplands, the South-Western Peninsula and East Anglia.

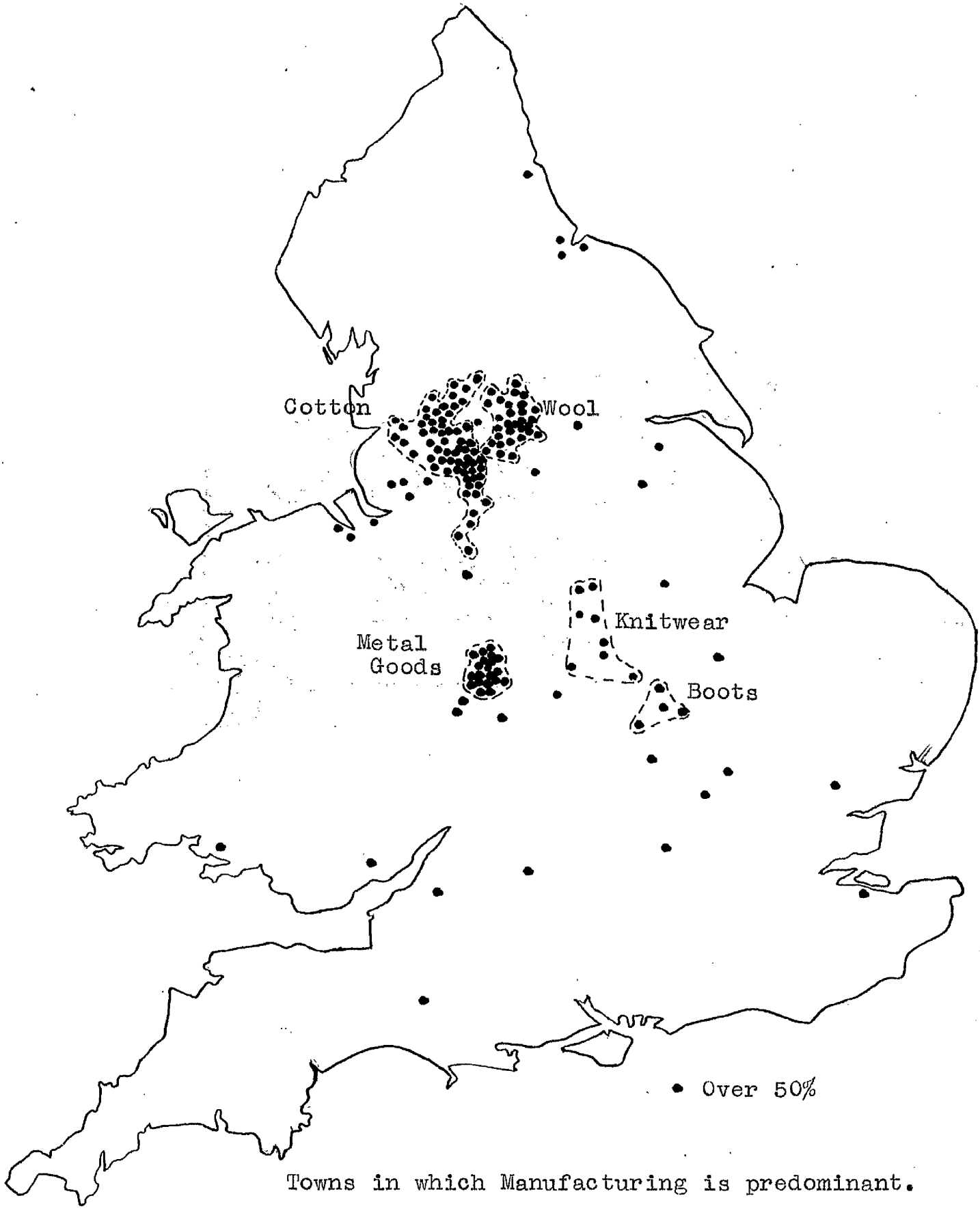
2) There is a marked concentration of industrial towns on three of the coalfields; the west Pennine coalfields, parts of the east Pennine coalfield and the south Midland coalfield.

3) An equally striking absence of similar concentrations on two of the major coalfields; the Northumberland-Durham field and the South Wales field, as well as the southern part of the East Pennine field.

4) Within the general distribution there are five striking regional concentrations.

ii) The 58 cotton manufacturing towns of the west Pennine foothills,
ii) The 31 woollen manufacturing towns of the Middle Aire and Calder Valleys in the East Pennines,
iii) The 20 light metal manufacturing towns of the Black Country,
iv) The 7 knitwear manufacturing towns in the North East Midlands.
v) The 4 bootmaking towns of the East Midlands.

The regional concentrations pose a geographical



Towns in which Manufacturing is predominant.

Fig. 80

problem of great significance which, in its simplest form, is: Have these seven regions peculiar and unique national advantages for the activities carried on in them? An affirmative answer would imply that each of these industries makes peculiar demands on the physical characteristics of its site and secondly that the seven peculiar physical attributes were restricted to small and separate parts of the country. Apart from the fact that no accounts of these industries have adduced such peculiar physical needs, it is difficult to imagine a set of physical characteristics showing such restricted distributions.

The fact that no peculiar attributes are known does not prove that they do not exist, but it seems very improbable that the above thesis, which is often implied, without being stated, can be true.

These industrial regions undoubtedly have general advantages for manufacturing industries, especially good transport facilities for the assembly of fuel and raw materials, and the distribution of their finished products, and some of them have special advantages for their own industry, although the advantages are neither unique nor valid solely for the industry concerned. There is no reason to suppose that the either the knitwear industry or the footwear industry would have been less efficient if their locations had been reversed; especially as both are important in Leicester itself.

If it is unlikely that the reason for these local specialisations and concentrations lies inthe physical attributes of the sites what reason is there for their existence? A useful comparison may be made with the distribution of vegetation. Once a plant is established it makes vegetative growth and, if it matures, it spreads its seeds over the neighbourhood to germinate and produce new plants so that its offspring spread over an expanding area around the original centre. The features of the map showing the distribution of industrial towns are consistent with similar processes.

Once an industry is established the successful firms expand and the "seed" of the successful ideas germinates and produces new firms of a similar kind and the "seed" may also spread from the original centre to the adjacent towns. Historically this is the way in which most of these regional concentrations of specialised industrial towns have arisen. The question of how the industry came to originate in the district is a matter history, in many cases of fairly remote history, and the industry may since have evolved into forms quite different from the original.

The various specialised regions show the extent of the expansion around the sites where the industry was successfully established. In the cases of the three largest industries, cotton, wool and the light metal industries there was rapid expansion over considerable

areas; in the cases of the minor industries, for example the knitwear, bootmaking and pottery industries, the number of offshoots is smaller, and some of the smaller industries, in which the demand is restricted, are still almost confined to the original centres, for example the straw-hat industry of Luton, the glass industry of St. Helens, and the furniture industry of Chepping Wycombe.

The above considerations apply particularly to new or expanding industries, but it must not be forgotten that in many cases an opposite process has also taken place; technical progress has led to fiercer competition between different districts, and concentration by the elimination of the less efficient firms, although the ones eliminated have not necessarily been those with the least suitable sites.

Apart from the historical process of expansion from centres of successful enterprise, there is no doubt that it is advantageous for manufacturing processes which are associated technically to be associated physically in the same region; consequently the development of an integrated group of manufacturing industries gives to the region in which they are carried on, economic and technical advantages over other areas as a site for associated or similar industries, although it may have no inherent physical advantages

Towns Providing Specialised Services.

These towns are characterised by having a very small proportion of their workers employed in productive activities, proportions even smaller than the standard for a regional centre, and by having an exceptionally large proportion of their workers employed in the "Regional Services" group. The large total in the latter group is made up of an exceptionally high proportion employed in one particular service and a proportion much smaller than normal in the remaining services. The high proportion of workers in the specialised service inflates the Regional Services ratio out of all proportion to the function of the town as a regional centre, and is in several cases much higher than the standard for a regional centre.

Towns of this type present two chief problems; to estimate the proportion of the population supported by the specialised service, Defence, Transport or whatever it may be, and also the number of people supported by the normal regional services.

a) Defence Centres.

The national defence services are included in Order XVIII with public administration but, in contrast with the latter activities which are widely distributed over the country and carried on chiefly from the regional centres, the national defence services are concentrated in a few centres; garrison towns and naval dockyards.

The following Urban Districts have more than 20% of their workers employed in the defence services:

	(1)	(2)	(3)
Farnborough	65.0	16,000	5,507
Aldershot	62.0	34,000	11,037
Cheriton	52.2	8,000	2,107
Portland	47.2	12,000	2,821
Gosport	43.2	38,000	6,684
Frimley and Camberley	37.8	17,000	3,075
Shoeburyness	37.5	7,000	1,096
Walmer	37.5	5,000	910
Gillingham	31.0	62,000	7,770
Sheerness	24.0	17,000	1,622
Portsmouth	22.5	249,000	20,888
Plymouth	21.0	208,000	17,306

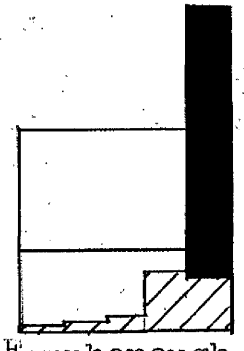
(1) Percentage of workers employed in the defence service
(2) Population.
(3) Number of men employed in the defence services.

Six of them were garrison towns and six naval dockyards.

1) Garrison Towns.

The most specialised of the garrison towns is Farnborough (16,356) where 5,507 men and 157 women were employed in the defence services and these 5,664 people made 65% of the workers in the district.

Fig. 91



Farnborough

The relations between the number of workers and the population is different in the garrison towns from those in

towns of ordinary type in which productive activities and regional services are the dominant interests. Even if Farnborough and Aldershot were entirely dependent on the garrison it is clear that the number of people dependent on 1,000 soldiers living in barracks is very much less than the number dependent on 1,000 men working in industry. Even in Aldershot the total population was less than three times the number of soldiers.

It is clear however that Farnborough and Aldershot are not entirely dependent on the garrison. If all people engaged in the defence services are subtracted the remainder employed in normal regional services is 80 per 1,000 inhabitants in Farnborough and 103 per 1,000 in Aldershot and these ratios are consistent with 6% of the population of Farnborough (1,000 people) and 16% of the population of Aldershot (5,500 people) being dependent on the provision of ordinary regional services for a surrounding area.

If we subtract these people the balance of the population is 2.8 times as large as the number of soldiers in Farnborough and 2.6 times as large in Aldershot. It is difficult to estimate how many people are supported by the productive activities in these two towns. The productive ratios are far below the standard for regional centres; 21 per 1,000 inhabitants in Farnborough and 35 per 1,000 inhabitants in Aldershot. If all the productive

activities had played independent parts in the growth of the two towns they would support respectively 1,250 and 4,300 people. This wouldleave 14,100 people or 86% of the population of Farnborough dependent on 5,507 soldiers and 24,500 people or 71% of the population of Aldershot dependent on 11,037 soldiers. These figures are respectively 2,55 and 2.2 times as large as the number of soldiers.

The number of people maintained by a garrison is therefore between 2.2 and 2.8 times as large as the number of soldiers and 2.5 may be taken as a representative ratio to be used in the case of othertowns where there is a garrison. The results of using this method are shown in the table below.

	(1)	(2)	(3)	(4)	(5)	(6)
Farnborough	16,356	5,507	13,800	84	6	1,000
Aldershot	34,280	11,037	27,500	80	16	5,500
Cheriton	8,089	2,107	5,200	68	15	1,200
Frimley and Camberley	16,532	3,075	7,700	46	23	3,800
Shoeburyness	6,720	1,096	2,750	41	46	3,100
Walmer	5,335	922	2,300	43	23	1,200

(1) Population
(2) Number of men employed in the defence services.
(3) (2) x 2.5 equals number of people supported by the garrison
(4) Percentage of the population dependnent on the garrison
(5) Percentage of the population dependent on ordinary regional services.
(6) Number of people dependent on ordinary regional services.

Most of the above are small towns and the whole conurbation of Aldershot, Farnborough and Frimley and Camberley has only 67,000 inhabitants of whom 49% or

49,000 or 73% are dependent on the 19,600 soldiers in the garrison. Only in Aldershot are normal regional services sufficiently developed for it to have a surplus over its own needs equivalent to a regional centre of over 5,000 inhabitants.

ii) Naval Bases.

The naval bases differ from the garrison towns in important respects. A larger proportion of the personal dependents of sailors lived in the naval bases, but 34,000 sailors were away from the country at the time of the Census (Appendix B, General Tables p.244) and those enumerated were not necessarily at their home port. Also most of the naval bases have important marine engineering industries associated with the naval dockyards.

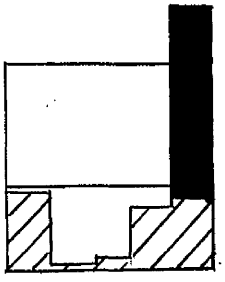
Because the number of sailors enumerated in the different ports does not bear a fixed relation to the number attached to or resident in the port, it is not possible to find any direct relation between the number of sailors enumerated and the population dependent on the defence services. We can however estimate the proportion of the population dependent on ordinary regional services and the number supported by marine engineering or any other outstandingproductive activitiy which is carried on the towns and so find athe remainder which gives a maximum for the number supported by the function as a naval base.

Number of people dependent on ordinary regional services and on productive activities in the chief naval bases.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Portland	968	80	6	700	4,000	12,019	7,300
Gosport	3,346	85	9	3,500	3,600	38,338	31,200
Sheerness	1,856	118	29	4,500	7,000	16,738	5,200
Gillingham	7,408	120	25	15,000	18,000	61,636	28,600
Portsmouth	35,833	144	38	95,000	46,500	249,000	108,500
Plymouth	31,906	154	44	91,000	42,500	206,000	72,500

(1) Number of people employed in regional services excluding the defence services.
(2) Ratio of (1) per 1,000 inhabitants.
(3) Corresponding percentage of population dependent on provision of regional services.
(4) Number of people supported by regional function.
(5) Number of people supported by marine engineering.
(6) Population.
(7) Balance dependent on men in the defence services.

Portland had a larger proportion of its workers employed in thedefence services than any ofthe other naval bases. There were 2,821 men and 20 women employed by the defence services and these made up 47.2% of the workers in Portland.



Portland

Fig. 92

Fig.93
The map shows the distribution of the Urban Districts with more than 10% of their workers engaged in the Defence Services (Table 20 a.) Most of the specialised defence centres are in the Home Counties and along the Channel coast, and several of the less specialised ones are adjacent to those that have already been considered.

The naval base of Plymouth has no important auburbs but Sheerness and Chatham are less specialised parts of the Medway naval base, of which Gillingham is the heart and Gosport and Fareham are extensions of the Portsmouth residential area. There were also many members of the Defence services in Weymouth which is adjacent to Portland but they only made 9.5% of the workers.

The three chief military districts, Farnborough, Aldershot and Frimley and Camberley are all parts of one complex unit. Small military garrisons made up over 10% of the workers in the small towns of Cheriton, Hythe, Shoeburyness, Walmer, Felixstowe and Windsor and there was a larger one in Dover. Colchester also had a large garrison but the remaining towns were merely the depots of county regiments which made up a considerable proportion of the workers merely because they were situated in small towns: Bodmin (5,526) the small county town of Cornwall, Kempston (5,390) and Fulwood (7,387) small urban districts adjacent to the larger towns of Bedford and Preston.

Percentage of workers employed in Defence.

Fig. 93.

b) Administrative Centres.

Administration is a normal function of regional centres and the largest proportion of workers employed in it in any town is only 21.1% at Bodmin; a proportion insufficient to make administration the dominant interest of the town.

The proportion of the workers employed in administration exceeds 10% in 40 Urban Districts, (Table 20 a.) most of them being places where the administration of a county is carried on from a market town of fewer than 20,000 inhabitants, as at Bodmin, Durham, Denbigh, Chichester, Carmarthen, Caernarvon, Lewes, Brecknock, Warwick and Dorchester, or suburbs of larger centres such as Cottingham near Hull, Prestwich near Manchester, Hoole near Chester and West Bridgford near Nottingham.

In some of the other cases the high proportion of the workers in this Order is due, not to any real administrative function, but to the existence of same large public institution such as a hospital, asylum or prison in a small Urban District, for example at Brentwood, and Dartford.

The map (Fig. 94) shows that these 40 Urban Districts are widely distributed over the country.

Percentage of workers employed in Administration

Fig. 94.

b) Transport Centres.

The most important transport centres are the large regional centres, but in them the transport workers make up only a small proportion of the total. There are however some highly specialised transport centres among the smaller towns.

The following 13 towns had over 20% of their workers employed in transport services.

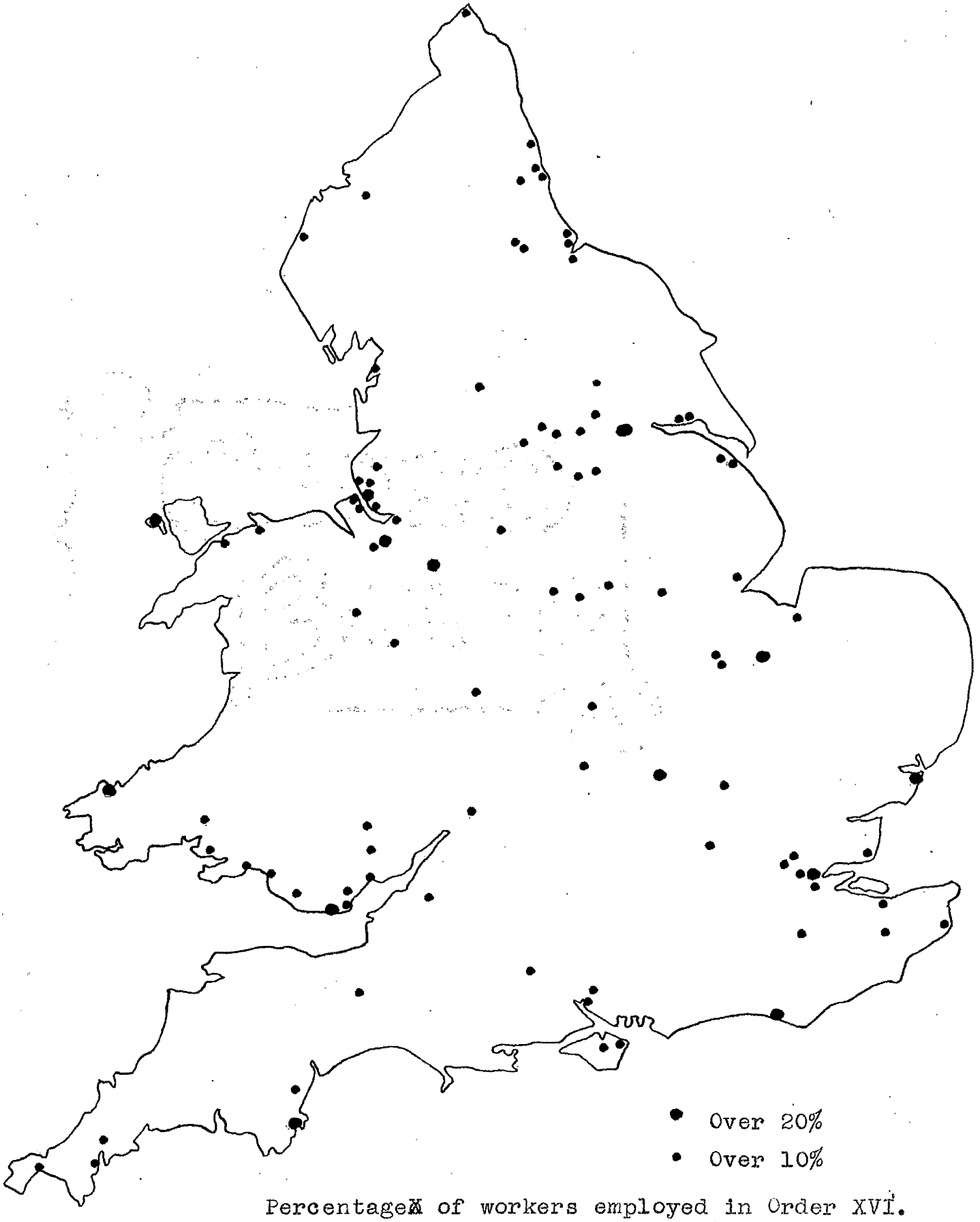
		Popn.
Tilbury	40.6	17,000
Goole	40.6	20,000
Holyhead	38.1	11,000
Newhaven	36.1	7,000
Harwich	33.2	12,000
March	32.6	11,000
Fishguard - Goodwick	31.7	5,000
Barry	30.6	39,000
Bletchley	27.4	6,000
Bootle	24.7	77,000
Crewe	22.0	46,000
Dartmouth	20.6	7,000
Hoole	20.1	6,000

i) Specialised Ports and Packet Stations.

i) Specialised Ports and Packet Stations.

The ma[illegible]il ports, but small specialised ones which have been created at sites suitable for their particular purpose but which have no general nodality and were not previously occupied by considerable settlements.

There are the packet ports which maintain communications with the Continent and with Ireland: Newhaven and Harwich, Holyhead and Fishguard. In none of these did the total number of people employed in all forms of transport exceed 1,500, so that these transport workers would not form a



Percentage of workers employed in Order XVI.
Transport and Communications.

Fig. 95.

considerable proportion of the workers in a town of over 20,000 inhabitants and would not by themselves support a town of more than 6,000 inhabitants.

	Water	Rail	Road	(1)	(2)	(3)	(4)
Fishguard	317	242	36	559	2,240	5,240	43%
Newhaven	724	206	50	930	3,720	6,800	55%
Holyhead	691	566	58	1,257	5,000	10,700	47%
Harwich	1,066	331	61	1,397	5,200	12,000	46%
Total	2,798	1,345					

(1) Total of water and rail transport workers
(2) (1) x 4; number of people dependnent on transport worker
(3) Population
(4) Percentage of population dependnent on trans port workers.

The number of raod transport workers is insignificant in these four towns, and although the number of rail workers varies considerably it is on the average about half the number of water transport workers. These conditions may be used in estimating the importance of the packet function among the miscellaneous activities of the larger towns such as Morecambe and Heysham, Folkestone and Dover.

	Water	Rail	Road	(1)	(2)	(3)	(4)
Morecambe and Heysham	550	399	310	825	3,300	24,542	13.4%
Folkestone	501	356	482	750	3,000	35,889	8.3%
Dover	1,088	728	421	1,600	6,400	41,097	15.6%

(1) Estimated number of transport workers associated with the port
(2) (1) x 4. Number of people dependent on the port.
(3) Population.
(4) Percentage of people dependent on the port.

Of the other specialised ports, Tilbury (16,800) owes its growth to the construction of the newest group of Thamesside docks as an outport for London. Goole (20,200) is the site of docks specially built to serve the East Pennine coalfield and industrial area by the shipment of bulk cargoes outward from the nearest point accessible to

moderate-sized cargo boats. Barry (38,900) is the nearest approach in this country to a specialised port for the bulk shipment of minerals, a type so strikingly developed on the shores of the Great Lakes of North America.

The most populous of the Urban units with over 20% of its workers engaged in transport was Bootle (77,000) but even in this smalldockside district of a great port the employed transport workers amounted to less than 25% of the total.

ii) Railway Operating Centres.

Specialised railway operating centres are less common than specialised ports. The construction of one of the main goods marshalling yards of the L.N.E.R. system at March (11,300) in the Fens has brought 1,400 railwaymen into the town and they made up 32.6% of the workers and supported 5,600 people or 50% of the population.

Bletchley had only 682 railwaymen, but in the absence of any other important activities they constituted 27.4%of the workers and supported almost 3,000 of the towns 6,000 inhabitants.

Crewe (46,000), one of the best-known of the towns created by the railway companies had more of its workers (5,000) employed in the railway engineering shops than in railway operating (3,500) and the latter constituted only 22% of the workers, andin Swindon (62,000) the 1,500 men employed in railway operating were less than 8% of the workers Hoole (6,000), although a separate Urban district, is really

a part of Chester and because it is adjacent to the main station there is a larger proportion of railwaymen among its residents than there is in Chester, although the number was smaller (414 cf. 1,092).

In the following table these towns are arranged in accordance with the porportion of the population dependent on transport workers:

	(1)	(2)	(3)	(4)	(5)
Tilbury	16,825	9,250	59%	2%	350
Goole	20,200	11,200	55%	20%	4,000
Newhaven	6,800	3,750	55%	30%	2,050
March	11,300	5,600	50%	15%	1,700
Holyhead	10,700	5,000	47%	21%	2,250
Harwich	12,000	5,600	47%	30%	3,600
Bletchley	6,170	2,750	45%	23%	1,400
Fishguard - Goodwick	5,240	2,250	43%	25%	1,300
Bootle	76,770	28,700	38%	32%	24,500
Barry	38,891	14,400	37%	29%	11,200
Crewe	46,069	14,000	31%	15%	7,000
Dartmouth	6,708	2,250	34%	39%	2,600
Hoole	5,889	1,600	27%	68%	4,000

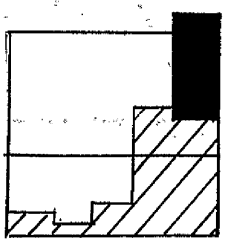
(1) Population.
(2) Number dependent on transport workers.
(3) Percentage dependent on tranport workers.
(4) Percentage dependent on ordinary regional services.
(5) Number dependent on ordinary regional services.

There were all together 98 urban districts with over 10% of their workers employed in the transport services. The map shows that they were widely scattered over the country although there is a tendency to grouping around the larger ports, as in the Liverpool district, and near the coalfields, as in North East England, the West Riding and South Wales.

d) Racing Centre.

The proportion of workers employed in providing entertainment and sport is very small almost everywhere. Among the large towns it is highest at Blackpool, but even there it is only 4.3%. Proportions between 2% and 3% are found in one or two of the smaller sea-side resorts such as Clacton and Skegness. Similar proportions in some small inland towns are possibly due to the temporary presence of wandering showmen attending local fairs.

Newmarket (9,750) stands out as a unique case with 23.4% of its workers employed in this Order which includes t the workers in the racing stables.

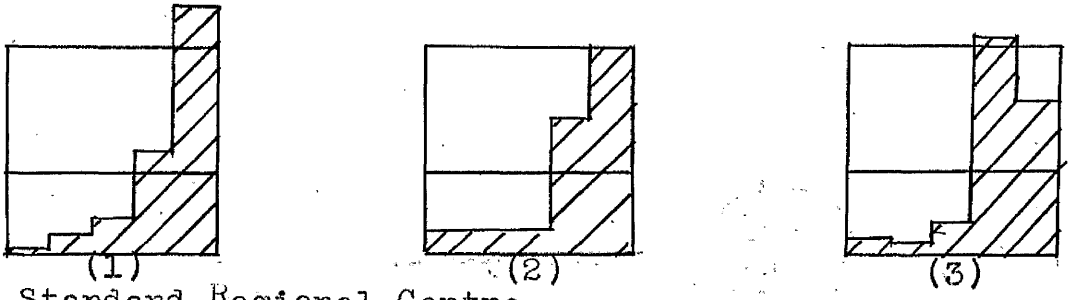


Newmarket
Fig. 96.

There were 990 men employed in the Order so that the racing stables alone would support a town of almost 4,000 inhabitants or 41% of the population. On the other hand the proportion of people employed in ordinary regional services was sufficient only for a town of 3,500 people or 36% of the population.

IV HEALTH AND HOLIDAY RESORTS.

The features of the diagrams of towns of these types have already been described. Like the Regional centres they are characterised by having only a small proportion of their workers employed in productive activities, characteristically even smaller than in the Regional centres.



(1) Standard Regional Centre.
(2) Transitional Type : Local Services 32.5%, Regional Services 50%.
(3) Holiday Resort: Shanklin.

Fig. 97

The proportion of workers employed in the "Regional Services" is fairly high even when these workers supply only the needs of the town itself and do not cater for the surrounding area. The proportion of workers employed in the "Local Services" is higher than in any other type of town, but the number of people employed in this group is an adjustment to, and not a primary cause of, the growth of such towns.

No direct relation can be found between the number of workers and the population of Health Resorts (See pages 67 and 68) because a large proportion of the population is not attracted or maintained there by opportunities for work. This type is negative rather than positive in character and the number of people associated with the "Resort" development/

development can only be estimated as a reminder, after calculating the proportion of the population who could be supported by the productive activities and regional functions carried on by the town.

Since the "Local Services" employ so large a proportion of the workers in the Health Resorts it is convenient to consider the way in which these services vary from town to town.

The least important group and the one which varies least from town to town is Order XV, which is concerned with the provision of gas, water and electricity. The demand for these services and the number of workers employed in the Order increases with the growth of the town, but does not itself help to maintain the rate of growth. The proportions of the workers employed in this Order are smallest in the smaller towns. In Bedlington for example all these services were supplied from outside and the proportion of the workers employed in the Order was only 0.1%. In most towns the proportion was between 1% and 2% and only in two exceptional cases did it exceed 3%. At Poole it amounted to 4% because Bournemouth gasworks are on the shores of Poole Harbour.

Order XIII, Building and Contracting, is larger and the proportion of workers employed in it varies widely from town to town, chiefly with the prosperity, and especially with the rate of expansion of the administrative unit concerned. The proportion is exceptionally low in the less prosperous mining and manufacturing towns (Ashington, 0.8%).

In the Regional Centres the proportion of the workers employed in building is generally between 4% and 8% but it ishigher in various areas of rapid expansion such as Hornchurch on the margin of Greater London, 11.4%, in the expanding seaside resorts (Torquay 10.5%) and especially in small areas at the margin of expanding seaside resorts; such as Christchurch on the margin of Bournemouth where the proportion was 15.9%.

Although this Orde cannot contribute anything permanent to the growth of any town, building operations may directly support aconsiderable proportion of the population in the early stages of expansion.

The dominant Order in the "Local Services" Group is "Personal Service". The workers in this Order consist chiefly of domestic servants and it is characterised by a very marked preponderance of women, who were over two and a half times as numerous as the men. There are extra-ordinarily wide variations from town to town in the proportions employed in the Order. The average for the country is 13.1%, but in the mining and manufacturing towns, in which the bulk of the population consists of working class families, the proportion employed in personal services is very low; e.g. 5.1% in Chadderton. On the other hand in the Health resorts and better class residential suburbs the proportion may be more than ten times as high, (Shanklin 48.5%). In Regional centres the proportion is generally between 15% and 20%. The proportion of workers employed in domestic service

(like that in the other Orders in this group) is adjusted to the needs of the town, but does not in any way directly control its growth or prosperity.

It is impossible to find any specific employment group to which the growth of such towns is related for the simple reason that a large proportion of the population is attracted to them for other reasons than the possibility of earning a living; the growth of these towns as a whole depends on the number of people who are free, permanently or seasonally, to choose their residence independently of any necessity of earning a living, and the rate of growth of the individual towns depends on the relative attractions and amenities they can offer to such people.

Although it is impossible to estimate directly the number of people who have been attracted to any of these towns by their development as Health Resorts and Residential centres, we can find what proportion of their population, if any, is maintained by productive activities which are independent of this function and what proportion of the population is supported by the provision of regional services for a surrounding area; This latter problem is of great importance in relation to the distribution of regional centres in the country; to find to what extent Blackpool acts as a regional centre for the Fylde or Torquay for South Devon.

Although productive activities are not theoretically part of the function of a health resort, any more than

they are of a Regional centre, yet a certain proportion of the population always is employed in such activities. It is quite certain that all the productive workers do not contribute to the growth of the town and that some of them would not be there but for the immediate market offered by the residents and visitors, and the problem is to decide how much of this productive activity is carried on to provide the needs of the population of the Health resort and is dependent on its growth although contributing no impetus to it. Among the 92 towns which fall within the above definition (Table 22) the proportion of men engaged in productive activities varies from 37 per 1,000 inhabitants at Seaford to 102 per 1,000 inhabitants at Stratford on Avon but, even in the case of Seaford, a few of the productive workers are carrying on activities which are independent of the existence of the Health Resort. The standard proportion may consequently be fixed a little lower than the minimum, say 30 people per 1,000 inhabitants, and any excess above this may be taken as contributing independently to the support of part of the population.

At Windlesham, for example, where the production ratio was 78, there was an excess of 250 men over this standard, sufficient to support a population of 1,000. This corresponds closely with the 286 men employed in farming. In Shanklin the productive ratio was 42 and the excess of men, 60, sufficient to support only 250 people. The excess in this case represented 52 farm workers and 10 fishermen.

In the case of Stratford on Avon (11,605), which has the highest productive ratio of any of these towns, 102, the standard number of productive workers would be 350 men and the number actually employed was 1,182, an excess of 832, sufficient to support 3,400 people.

The choice of the standard may be confirmed by comparing Stratford on Avon with another town of similar size but low productive ratio such as Herne Bay (11,249) which had one of the lowest productive ratios, 44 per 1,000. The standard there would be 340 men engaged in production so there was an excess of only 147 men employed in productive activities.

	(1)	(2)	(3)
Order I	0	7	-7
Order II	276	96	180
Order III	23	9	14
Order IV	41	5	36
Order V	24	10	14
Order VI	375	108	256
Order VII	4	0	4
Order VIII	9	2	2
Order IX	33	46	-13
Order X	302	73	229
Order XI	38	43	-5
Order XII	47	79	-32
Order XIV	12	19	-7

(1) Number of men employed in Stratford on Avon.
(2) Number of men employed in Herne Bay.
(3) Difference between (1) and (2).

Total of excesses in favour of Stratford on Avon	749
Total of excesses in favour of Herne Bay	64
Net excess in Stratford on Avon	685
Excess of Herne Bay over standard	147
Excess of Stratford upon Avon over standard	832

It will be seen that the chief productive activities of Stratford upon Avon which are in excess of the standard are the metal industries (at least 265 men), the food

industries and brewing (at least 239 men) and farming (at least 180 men). Quarrying, brickmaking and chemical works are also plainly unnecessary for the function of a residential centre and these employed 88 workers making a total of 772 men or almost the excess above the standard adopted.

In the case of the towns with populations of over 50,000 the standard productive ratio must be higher since the figure includes men out of work as well as those employed. The lowest productive ratio among these towns was 46 at Hastings, and there the productive activities that appear to be independent of the growth of the Health Resort do not employ more than 300 men, and the removal of these from the productive ratio would give a standard of approximately 40 per 1,000 inhabitants.

By using this standard and multiplying the excess by 3.6 the numbers of people dependent on productive activities in the larger Health Resorts are as follows

	(1)	(2)	(3)	(4)	(5)	(6)
Hove	54,993	2,300	2,885	685	2,500	4.6%
Poole	57,211	2,300	4,643	2,340	8,500	15.0%
Eastbourne	57,435	2,300	2,709	409	1,500	2.6%
Bath	63,815	2,550	6,233	3,683	13,400	21.0%
Hastings	65,207	2,600	3,023	423	1,500	2.3%
Southport	78,925	2,360	5,887	3,527	12,800	16.3%
Blackpool	101,553	4,050	6,736	2,686	9,700	9.5%
Bournemouth	116,797	4,650	6,100	1,450	5,250	4.5%
Brighton	147,427	5,900	10,972	5,072	18,400	12.5%

(1) Population.
(2) Standard number of men associated with production.
(3) Actual number of men associated with production.
(4) Number of men in excess of standard.
(5) Number of people supported by these activities.
(6) Percentage of population dependent on productive activities.

Thus the only ones in which more than 10% of the population was dependent on productive activities were Bath (21%), Southport (16.3%), Poole (15%), and Brighton (12.5%).

By comparing Poole and Eastbourne we can find out which industries are responsible for the excess engaged in production. In Poole the two chief activities are the manufacture of bricks and earthenware (1,225 men) and of explosives (592 men). These alone are sufficient to support 6,600 people.

Similarly by comparing Bath and Hastings, which are of similar size, it is clear the excess at Bath is chiefly due to the development of the engineering industry, (excess 1,500 men) the furniture industry (excess 660 men) printing etc. (excess 450 men) and clothing (excess 500 men) and these 2,900 men are sufficient to support nearly 11,000 people.

The engineering industry at Bath includes the manufacture of cranes and other lifting machinery on a considerable scale.

It is more difficult to find which Orders are specially developed in Southport, Blackpool, Bournemouth and Brighton but by comparing the numbers of men associated with the different Orders in these towns we get some useful indications.

~~Order I~~ ~~45~~ ~~18~~

	(1)	(2)	(3)	(4)
Order I	45	122	4	115
Order II	669	487	873	824
Order III	103	306	119	73
Order IV	35	204	209	67
Order V	189	175	155	203
Order VI	2,109	1,601	1,568	5,119
Order VII	364	472	102	93
Order VIII	52	34	47	57
Order IX	533	598	574	799
Order X	767	1,244	887	1,624
Order XI	417	657	676	744
Order XII	474	638	622	906
Order XIV	130	195	264	358

(1) Southport
(2) Blackpool
(3) Bournemouth
(4) Brighton

To correspond to the population of the towns the number of men associated with each Order should increase from left to right and be about 50% greater in Brighton than in Blackpool.

Order I, Fishing is not an essential occupation of a Health Resort but employs only a small number of men. Farming is relatively important in the extensive unbuilt areas of these wide-spreading administrative units. Order III, mining, shows a preponderance atBlackpool; but further investigation shows that of 209 men employed in this group 182 were coal miners, who obviously did not work in Blackpool but happened to be staying there, and the same thing is probably true of the people employed in the cotton industry, (169 men and 112 women employed). Among the visitors of a large Health Resort we may expect to find, even in April, some employed in most of the productive activities, especially those carried on on a large scale

in the neighbouring district. The only Orders with which there were at the same time both large numbers of men associated and considerable variations between the four to ns were the metal industries, in which there is a large excess at Brighton and a smaller one at Southport, and the food industries, in which both Blackpool and Brighton show considerable excesses in comparison with Bournemouth.

Thus at Bournemouth there is hardly any productive activity which is independent of the Health Resort and the excess of men associated with productive activities was largely due to visitors who were associated with these activities[1].

Even in the case of Blackpool the 9,700 people estimated to be dependent on productive activities, were partly the dependents of visitors and partly the dependents of workers associated with a wide variety of small scale industries of which the food industries, which include biscuit and sweet-making in addition to the more common forms, were the most important.

In Southport the only industry employing large numbers of men was the construction of road vehicles and car bodies in which sufficient men were employed to support 3,000 people.

In Brighton the engineering and food industries have developed to such an extent as to be able to support a considerable number of people.

Among the Engineering industries, the railway locomotive shops employed 686 men, the railway carriage works 873 men and electrical manufactures 1,124. These activities alone are sufficient to support over 10,000 people. Coach building was also carried on on a scale sufficient to support a further 1,000 people. Brewing employed 502 men and was capable of supporting a further 2,000 people. These large scale activities account for 13,000 out of the 18,400 people estimated to be dependent on productive activities.

The problem of estimating the extent to which Health and Residential resorts act as Regional centres is difficult and complicated, in view of the fact that some of the workers in the "Regional Services" group also supply local needs. In the case of productive centres it was estimated that there was not balance available for supplying the needs of a surrounding region unless the number of workers employed in the "Regional Services" group was over 70 per 1,000 inhabitants. It is clear that the demand for such services will be higher in the Health resorts than in the productive centres, and that a ratio that would provide a surplus for regional services from a productive centre might not be sufficient to supply the greater demands of a Health Resort or Residential centre. Consequently the use of the ordinary "Regional Services" ratio to estimate the importance of the Health Resorts as Regional centres would lead to a considerable over-estimate. There is another complication. Of the Orders included in the "Regional

Services" group two, Professional Services, especially medical services, and Entertainments, tend to reach their highest proportions in the Health Resorts, and although an increase in these Orders helps to raise the ordinary "Regional Services" ratio, it does not imply an increase in normal regional functions, but merely a greater specialisation on the functions of a Health Resort. Consequently it is necessary in comparing Regional Centres and Health Resorts to adopt a new ratio based only on the transport, commercial and administrative Orders, which can be referred to as the ratio of the selected Regional Services.

For example both Christchurch and Bexhill have "Regional Services" ratios of 163 but the removal of the workers employed inthe Professions and Entertainment reduces the ratio at Christchurch to 150 but at Bexhill to 117.

Among the towns classed as Health resorts on the grounds of the form of their diagram, the ratio for the selected regional services varies from 98 per 1,000 at St. Ives to 176 per 1,000 atFelixstowe, (Table 22) whilst for the four Regional centres in which the normal Regional Ratio is n arest to the Standard Bangor, 235, Truro, 234, Oswestry, 237, and Shrewsbury, 235, the ratio of the selected regional services varies from 193 at Bangor to 220 at Shrewsbury and averages 208. Thus a ratio of 200, slightly below the average to compensate for the excessive development of certain of the services in the individual towns, seems to

be a suitable standard to take for the ratio of selected regional services in a normal Regional centre.

The choice of the standard ratio for selected regional services for a Health Resort without any regional function is more difficult. The six towns with the lowest ratios, St. Ives, 98, Milton, 99, Windlesham, 102, Clevedon, 108, Neston and Parkgate, 108, and Northam, 109, all seem to be open to objection, either as being partly dependent on a neighbouring larger town, as at Milton and Northam or having a considerable number of productive workers as at St. Ives, Windlesham and Neston. On the other hand Broadstairs, 115, and Bexhill, 117, offer examples of independent towns without any regional function, and Swanage, 120, is a town with a small regional function. These facts suggest that the most appropriate standard ratio is 115. By the use of a graph indicating the ratios produced by combining these two standards in different proportions we can analyse the conditions at any Health resort in terms of the standard Health Resort and the standard Regional centre. It is not to be expected that the divergences from these standards will be less than 10%, and they may well be more, nevertheless the ratio of workers employed in the selected Regional Services does give a basis for arranging the Health resorts in order of the relative importance of the regional function, and for distinguishing those towns in which either the Regional or the Health Resort function is clearly predominant from those in which they are of

approximately equal importance, and for estimating the number of people supported by the regional function with sufficient accuracy to enable the towns to be placed in the correct grades on the map showing the distribution and relative importance of the regional centres of England and Wales. The following table shows the Health Resorts with fewer than 50,000 inhabitants arranged in order of their importance as Regional Centres.

Health Resorts with fewer than 50,000 inhabitants and over 5,000 people dependent on ordinary regional functions.

Tunbridge Wells	23,700	Worthing	11,500
Folkestone	22,500	Hoylake and West Kirby	11,200
Harrogate	19,400	Buxton	9,600
Torquay	18,000	Felixstowe	8,700
Scarborough	18,000	Rhyl	8,400
Morecambe and Heysham	16,800	Bridlington	8,2000
Reigate	15,800	Maidenhead	6,800
Weston Super Mare	14,400	Lytham St. Annes	6,700
Cheltenham	13,800	Farnham	6,600
Margate	13,800	Ryde	6,300
Woking	13,800	Dorking	5,600
Ramsgate	13,200	Bognor	5,300

As was the case with the selection of the standards for Productive centres and Regional c ntres, the Health Resorts with more than 50,000 inhabitants are not sufficiently numerous or nor are any of them sufficiently single in function to be used directly for establishing standards, so that standards for these towns have to be obtained by adding 8.5% to the standards for the smaller towns, to compensate for the inclusion of that additional proportion of unemployed people. The standard ratios of people associated with the selected Regional services

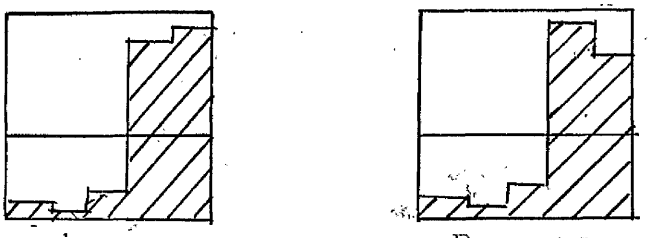
in towns of over 50,000 inhabitants are 125 per 1,000 inhabitants for a standard Health Resort and 215 per 1,000 inhabitants for the standard Regional centre.

In relation to these standards it would appear that the Health resorts with over 50,000 inhabitants have the following number of people dependent on ordinary regional functions.

Brighton	88,000
Blackpool	55,000
Bournemouth	43,300
Hastings	32,700
Bath	29,200
Eastbourne	27,500
Hove	17,600
Poole	16,600

From these tables the Health resorts can be shown on the map of Regional centres in the grades appropriate to the then relative importance as Regional centres.

If we estimate the number of people in any individual Health Resort who depend on productive activities and on ordinary regional functions and subtract these from the total population we are left with a remainder which represent the part of the population that has been attracted to the town by its function as a Health Resort. According to such estimates the two most specialised Health Resorts are Broadstairs and Bexhill.



Broadstairs Bexhill

Fig. 98.

In Broadstairs (12,745) the number of people employed in the three selected Regional Services (Transport, Commerce, and Administration) was 1,475 or only 115 per 1,000 inhabitants, so that there was no excess over the standard and none of the population was dependent on supplying the needs of a surrounding area. The number of men employedin productive activities was 490 and the male unemployment rate was 9.9%. The standard number of men in productive activities for a town of this size is 382, so that there was an excess of 108 men; sufficient to support only 432 people leaving a balance of 12,315 people or 97% of the population dependent on the function as a Health Resort.

The following table shows the conditions in the towns in this group with over 30,000 inhabitants:

	(1)	(2)	(3)	(4)	(5)	(6)
Brighton	147,427	88,000	18,400	106,400	41,000	28%
Bournemouth	116,797	43,300	5,250	48,550	68,247	59%
Blackpool	101,553	55,000	9,700	64,700	47,000	46%
Southport	78,925	45,000	12,800	57,800	21,200	27%
Hastings	65,207	32,700	1,500	34,200	31,000	47%
Bath	63,815	29,200	13,400	42,600	21,200	33%
Eastbourne	57,435	27,500	1,500	29,000	28,400	49%
Poole	57,211	16,600	8,500	25,100	32,100	56%
Hove	54,993	17,600	2,500	20,100	34,900	64%

(1) Total Population.
(2) Number dependent on ordinary Regional functions.
(3) Number Dependent on Productive Activities.
(4) (2) + (3)
(5) Remainder : Number of people attracted by the function as a Health Resort.
(6) Percentage of population dependent on the function as a Health Resort.

The largest proportion of the population dependent on the function as a Health Resort among the above towns

is at Hove, where 64% of the population was dependent on this function. The largest number of people contributed by its development as a Health Resort to any one town was 68,000 in the case of Bournemouth, and it seems clear that some 100,000 people have been attracted to the Bournemouth-Poole district by its development as a Health resort, in comparison with 75,000 in the Brighton and Hove District, and 50,000 at Blackpool. On the other hand it is to be noted that in the two oldest Health resorts, Bath and Brighton, the development of other interests has reduced the percentage of the population dependent on the original function to 23% and 28% respectively.

On the basis of the above standards calculations have been made, for each of the 98 towns which fell within the original definition, of the numbers of people dependent respectively on productive activities, and on regional services for a surrounding area. The remainder of the population represents the number who have been attracted to the Health Resort independently of such functions. The results are shown in table ... and the following summary gives merely the percentage of the population which is independent of productive or regional activities. On this basis the towns can be classified into three groups;

1) Towns in which the health resort function is dominant.

Broadstairs	97%	Sandown	65%
Bexhill	93%	Hove	64%
Burnham on Sea	87%	Worthing	64%
Swanage	86%	Exmouth	63%
Milton	85%	Marlow	62%
Neston and Parkgate	84%	Whitby	61%
Northam	83%	Wokingham	61%
Seaford	82%	Bournemouth	59%
Windlesham	81%	Herne Bay	59%
Walton on Thames	80%	Ilfracombe	59%
Burgess Hill	77%	Lytham St. Annes	58%
St. Ives	77%	Bognor	57%
Clevedon	76%	Cheltenham	57%
Sidmouth	76%	Weybridge	57%
Shanklin	74%	Poole	56%
Newquay	74%	Chertsey	55%
Egham	73%	Torquay	55%
Malvern	72%	Scarborough	54%
Porthcawl	72%	Prestslade	54%
Ventnor	71%	St Helens	54%
Colwyn Bay	71%	Whitstable	54%
Paignton	70%	Knutsford	52%
Windermere	70%	Wilmslow	52%
Minehead	68%	Margate	52%
Teignmouth	67%	Aberystwith	51%
Littlehampton	66%	Rickmansworth	51%
Tettenhall	66%	Sevenoaks	51%
Clacton	65%		

2) Towns in which the Health Resort function is important, but not dominant over all other activities.

Caterham and Warlingham	49%	Bridlington	47%	Harrogate	42 %
Skegness	49%	Hastings	47%	Henley on Thames	41%
Leatherhead	49%	Llandudno	46%	Weston Super Mare	41%
Eastbourne	49%	Blackpool	46%	Woking	37%
Southborough	48%	Christchurch	45%	Knaresborough	36%
Southwick	48%	Lymington	44%	Ryde	35%
Ramsgate	47%	Maidenhead	43%	Formby	35%
Farnham	47%	Ilkley	43%	Hythe	34%
E. Grinstead	47%	Haywards Heath	43%	Reigde	34%
		Godalming	43%		

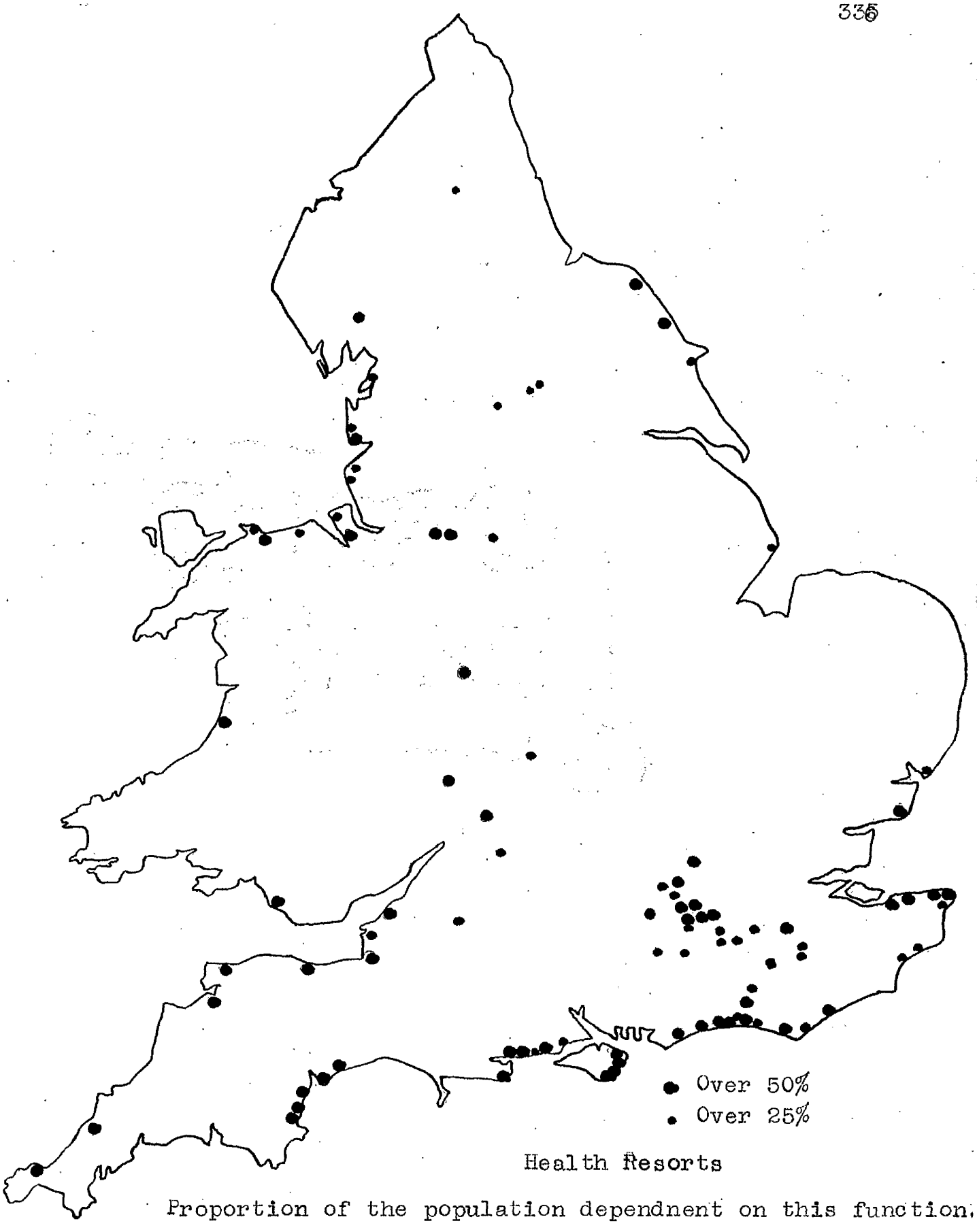
3) Towns in which more than two thirds of the population The population are dependent on other functions.

Folkestone	33%	Dorking	30%	Bath	24%
Stratford on Avon	33%	Brighton	38%	Tunbridge Wells	22%
Hexham	32%	Southport	27%	Felixstowe	20%
Rhyl	31%	Hoylake	26%	Buxton	17%
Circencester	30%	Morecambe and Heysham	24%		

Fig.99

The distribution of these towns is shown on the map. The influence of favourable climatic conditions and easy accessibility from large centres of population is shown in the string of resorts along the south coast from Whitstable to Paignton. On the other hand there are only five specialised resorts with over 5,000 inhabitants along the East coast north of the Thames; Clacton, Skegness, Bridlington, Scarborough and Whitby; the four latter are related to the East Pennine industrial area. Apart from the two remote Cornish resorts (St Ives and Newquay) there are six sea-side resorts on the Bristol channel, which is easily accesible from South Wales but only one in Cardigan Bay which is less accessible. The string of sea-side resorts along the shores of Liverpool Bay from Llandudno to Morecambe, is as much related to the Lancashire hinterland as to the coastal characteristics.

The inland towns shown on the map are of varied types. They include long established spa's in some of which, such as Bath and Tunbridge Wells, other interests are now predominant, whilst in Cheltenham, Malvern and Harrogate the spa function remains important. Many of the other inland towns are merely residential suburbs for



Proportion of the population dependnent on this function.

Fig. 99.

nearby large towns, such as Tettenhall adjacent to Wolverhampton, Knutsford and Wilmslow in Cheshire within easy distance of Manchester; Ilkley and Knaresborough near the West Riding industrial district and Hexham within easy reach of Tyneside and there is the whole group of residential districts to the west and south of London making a crescent from Rickmansworth, via Egham and Godalming to Sevenoaks. Windermere on the other hand is an ordinary holiday resort, based on the scenic attractions of the Lake District.

SUMMARY

The most specialised Health Resorts are comparatively small, but the resort function is dominant in all the components of the Bournemouth-Poole-Christchurch group, in which the population totals nearly 190,000. In other large Health resorts other interests have been developed and have out grown the original function in importance; at Brighton, for example, which in contrast to Hove is both an important regional centre and industrial centre. Undoubtedly some of the regional function attributed to Brighton is a reflection of functions performed in London by residents of Brighton but there is no means of distinguishing these from the Census statistics. The same is true of Southport in relation to Liverpool, and of other townswhich do not fall within the above definition; Southend in relation to London, Wallasey to the other Merseyside towns and Whitley to Tyneside.

V REGIONAL CENTRES.

Out of the 688 Urban districts in the country there were only ten in which the regional function existed in a state of comparative purity and they all had fewer than 35,000 inhabitants. The more important a town becomes as a regional centre the more likely it is to develop a variety of interests including a wide variety of manufacturing industries.

In this section the towns will be considered not from the point of view of their relative purity of type and singleness of function but according to the number of people in each town who depend on the exercise of the regional function, and this number will be used to grade the different towns according to their importance as regional centres.

The "Regional Services" ratio was devised with the object of estimating the number of people in each town dependent on regional services ~~and~~ if regional and productive functions are the only ones with which the town is concerned. For other types of towns some modifications of method are necessary.

In the previous chapter the appropriate method was outlined by which the Holiday resorts can be graded according to the extent to which they also act as ordinary regional centres. Of the ninety-eight towns considered in that chapter the ones with over 5,000 people dependent on their function as regional centres are shown

in the tables on pages 334 and 335.

It has also been shown that certain towns owe their exceptionally high "Regional Services" ratio not to their importance as centres for the surrounding district, but to the fact that they provide certain specialised services.

Many Urban districts have a high "Regional Services" ratio because they have a large number of water transport workers and dockers. If these are retained in the calculations they give coastal towns an appearnace of greater importance as regional centres than corresponding inland centres. The water transport workers represent only the over-seas aspct of the transport facilities whilst the railwaymen and road transport workers adequately represent the inland services.

Consequently in towns in which there were a considerable proportion of dockers and water transport workers new ratios have been calculated from which the dockers and water transport workers have been omitted.

Towns with over 50,000 inhabitants.

	(1)	(2)	(3)	(4)	(5)
Greater London	80,207	10	209	75	6,100,000
Liverpool	45,617	53	183	60	515,000
Hull	14,755	47	168	52	163,000
Southampton	11,635	66	151	42	74,000
Cardiff	8,905	40	200	70	156,000
Birkenhead	7,281	49	163	49	72,600
Bootle	7,256	95	143	38	29,000
Bristol	6,381	16	179	58	230,000
South Shields	5,879	52	124	27	31,000
Salford	4,597	20	166	51	114,000
Swansea	4,451	54	130	31	51,000
Wallasey	4,183	43	212	76	74,000

Middlesborough	4,092	29	121	26	36,000
Sunderland	3,232	16	130	31	58,000
Newport	2,804	31	177	57	51,000
Newcastle	2,771	10	176	57	162,000
Tynemouth	2,607	40	148	41	27,000
Manchester	2,531	3	195	67	515,000
Grimsby	2,391	26	158	47	43,000
West Hartlepool	1,625	24	152	42	29,000
Plymouth	1,595	8	228	86	178,000
Preston	1,332	11	157	46	55,000
Southend	1,116	9	222	81	97,000
Portsmouth	1,089	4	224	83	206,000
Yarmouth	1,032	18	169	52	28,000
Stretford	905	16	182	60	34,000
Barrow in Furness	871	13	111	20	13,000
Gateshead	801	7	152	42	51,000
Ipswich	440	5	173	55	48,000

(1) Number of people associated with water transport and dock work.
(2) Ratio of (1) per 1,000 inhabitants.
(3) "Regional Services" ratio less (2).
(4) Percentage of population dependent on ordinary regional services excluding water transport.
(5) Number of people dependent on ordinary regional services excluding water transport and dock workers.

Similarly, although the provision of transport services is among the essential and characteristic functions of regional centres it is equally undesirable that the regional importance of a town should be over-estimated merely because it has exceptional transport facilities. This can be avoided by adopting a ratio of 40 transport workers per 1,000 inhabitants as the maximum for inclusion ~~in the~~ "Re in the "Regional Services" ratio and by regarding any transport workers in excess of this ratio as being independent of the town's function as an ordinary regional centre. The following table shows the number of people dependent on regional functions according to the ordinary

"Regional Services" ratio and also according to the adjusted ratio from which the excess of transport workers has been omitted.

Towns with over 50,000 Inhabitants.

	(1)	(2)	(3)	(4)
Carlisle	62	171	53	31,000
York	58	195	67	56,000
Watford	55	195	67	38,000
Newport	54	163	49	44,000
Doncaster	52	165	50	32,000
Gloucester	51	191	65	34,000
Derby	46	152	42	61,000
Exeter	42	226	83	54,000

(1) Ratio of land transport workers per 1,000 inhabitants.
(2) Adjusted "Regional Services" ratio.
(3) Corresponding percentage of population dependent on ordinary regional services.
(4) Number of people dependent on ordinary regional services.

Similarly the "Regional Services" ratio of some towns is inflated by workers in the defence services who do not contribute to the ordinary regional function of the town. The following table shows the towns with over 50,000 inhabitants in which more than 2 per 1,000 of the inhabitants were associated with the defence services.

Towns with over 50,000 inhabitants.

	(1)	(2)	(3)	(4)	(5)
Gillingham	7,909	128	118	24	15,000
Portsmouth	21,114	85	139	35	87,000
Plymouth	17,450	84	144	38	79,000
York	2,109	25	170	53	45,000
Exeter	784	12	212	76	49,500
Oxford	963	12	181	59	48,000
Norwich	711	6	165	50	63,000
Reading	580	6	191	65	63,000
Bury	277	5	135	33	19,000
Lincoln	331	5	148	41	27,000
Brighton	662	4	(Holiday Resort)		
Carlisle	221	4	167	51	29,000
Newcastle	1,017	4	102	54	153,000
Halifax	274	3	132	31	32,000

Newport	265	3	160	47	42,000
Northampton	293	3	151	42	39,000
Southampton	500	3	148	41	72,000
Southend on Sea	309	3	219	80	96,000
Warrington	273	3	121	26	21,000
Bristol	624	2	177	57	230,000
Cardiff	398	2	198	69	154,000
Derby	311	2	150	42	60,000
Ipswich	183	2	171	53	46,000

(1) Number of people associated with defence services.
(2) Ratios of people associated with defence services per 1,000 inhabitants.
(3) Adjusted "Regional Services" ratio.
(4) Corresponding percentage of population dependent on ordinary regional services excluding defence services.
(5) Number of people dependent on ordinary regional services excluding defence services.

There are ~~two~~ other types of towns in which it is desirable to adjust the "Regional Services" ratio; the fishing ports and the University towns. In the former the "Regional Services" ratio is inflated by a large number of wholesale fish dealers.

	(1)	(2)	(3)	(6)	(7)
Grimsby	1,849	20	138	35	32,000
Hull	2,056	7	164	49	154,000
Yarmouth	270	5	164	49	28,000
Tynemouth	280	4	144	38	24,500

(1) Number of wholesale fish dealers.
(2) Ratio per 1,000 inhabitants.
(3) Adjusted "Regional Services" ratios.
(4) & (5) Percentage and number of people dependent on ordinary regional services.

In the four towns most comparable to Oxford and Cambridge in size and general character, York, Ipswich, Lincoln and Exeter the average number of people employed in Education (other than Government or Local Authority) was 300 whilst in Cambridge it was 3,038 and Oxford 2,837. The excess over the average corresponds to 41 people per 1,000 inhabitants in Cambridge and 32 per 1,000 inhabitants in Oxford.

	(1)	(2)	(3)	(5)	(6)
Cambridge	3,038	41	180	58	39,000
Oxford	2,837	32	149	41	33,000

Similar adjustments have been made as far as possible, in the cases of towns with 5,000 - 50,000, inhabitants and the results are shown in tables 23, 24, and 25.

There were some towns with special characteristics that need separate consideration.

In the case of the highly specialised transport centres Goole, Tilbury, Newhaven and March, in which over 50% of the population was dependent on transport workers (see p.315) it is desirable to consider all the people dependent on workers in ordinary regional services. a "Services" ratios were calculated from which all transport workers were omitted, and the same was also done for the other six towns with fewer than 50,000 inhabitants, in which the number of people dependent on transport workers exceeded the number dependent on all other forms of regional service; Holyhead, Harwich, Bletchley, (Fishguard-Goodwick), Barry and Crewe. Only two of these towns had over 5,000 people dependent on regional services other than transport; Barry 11,000 and Crewe 7,000.

The fishing ports Milford Haven, Fleetwood and Paul also received special consideration and none of them had over 5,000 inhabitants dependent on ordinary regional services, in spite of their abnormally high "Regional Services" ratios, which were inflated by the presence of large but unspecified numbers of wholesale fish dealers.

In the Lindsey division of Lincolnshire, outside Grimsby and Lincoln City, there were 1,127 wholesale fish dealers and at least 1,000 of these must have lived in Cleethorpes, a ratio of 35 per 1,000 inhabitants. If these are excluded as well as the water transport workers the adjusted services ratio becomes 130 per 1,000 corresponding to 36% of the population or 10,3000 people being dependent on ordinary regional services.

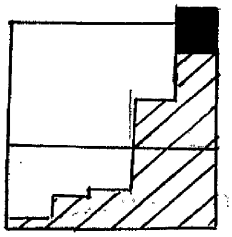
The "Regional Services" ratio of Newmarket is greatly inflated by the employees of the racing stables and the number of people dependent on ordinary regional services. is less than 5,000.

In the case of the Holiday Resorts estimates were made in the previous section of the numbers of people dependent on selected regional services and these have been further adjusted by removing any water transport workers or defence workers; see Table 26.

The Urban district of Weymouth and Melcombe Regis provides an exceptionally interesting combination of functions; it is partly a regional cet re, partly a Health Resort and partly a Defence centre. The two latter functions balance each other so that the diagram shows neither the high proportion of workers in "Local Services" characteristic of Health Resorts, no the exceptionally high proportion employed in "Regional Services" characteristic of the Defence centres. Thus the diagram shows neither the characteristics of a Health resort nor of a Defence centre, but appears similar to that of a

normal regional centre. The characteristics form of diagram of a Health Resort is easily seen if the Defence workers are shown seperately as in the diagram below,

Fig. 100



Weymouth & Melcombe Regis

Consequently in spite of the form of its diagram Weymouth has been treated in the same way as the other Health resorts, and it appears that only 6,200 people of its inhabitants were dependent on its function as a regional centre.

The list of those Urban Districts in which more than 5,000 people were dependent on the function of the town as a centre for a surrounding region, and the final estimates of the number of people dependent on this function is given in Table 27. Although the actual number of people in any urban district dependent on its regional function may diverge by as much as 6% in normal cases, and even more in exceptional cases, from the figure given in the table, nevertheless these figures do provide a basis on which the towns can be sorted into grades according to their relative importance as regional centres.

Greater London had over 6 million people dependent on its regional function, and there were altogether 271

Urban administrative units in which more than 5,000 people were dependent on the provision of regional services for a surrounding area, so that on the average there was one regional centre for each 215 square miles, equivalent to a circle with a radius of a little over 8 miles (8.28 miles).

~~There were 5 Urban districts with 200,000 to 1,000,000.~~ The number of people dependent on the provision of regional services, was between 200,000 and 1,000,000 in between 100,000 and
5 Urban districts, (200,000 in 7, between 50,000 and 100,000 in 19, between 25,000 and 50,000 in 43, between 10,000 and 25,000 in 80 and between 5,000 and 10,000 in 110 urban units.

Although any grading of such a continuous series must be arbitrary, the following classification seems to be the simplest and most convenient, for the towns outside Greater London.

1) Provinicial centres.

   Urban units with 200,000 - 1,000,000 people dependent on regional services.

2) Regional Centres.

   Urban units with 50,000 - 200,000 people dependent on regional services.

3) Market Towns.

   Urban units with 5,000 - 50,000 people dependent on regional services.

   a) Large market towns 25,000 - 50,000 people
   b) Medium sized Market towns 10,000 - 25,000 people
   c) Small market towns 5,000 - 10,000 people

   There are of course many still smaller market towns

with fewer than 5,000 people dependent on the provision of regional services.

Some of the Urban districts in the above table belong to town groups and cannot be considered as separate individual centres; these have been grouped at the end of Table 27. This grouping alters the grade of the dominant centre in the above classification only in the cases of the Newcastle district where there were altogether 218,000 people dependent on the regional functions; the Medway towns which had 39,000 people, and the Lancaster district which had 30,000 people dependent in the provision of services for a surrounding area. Apart from these adjustments the grading of the table has been adhered to with the single exception of Sheffield, where the number of people dependent on regional functions was only slightly below the arbitrary limit of 200,000, and it has been included with the Provincial centres to which it is much more comparable in importance than to the other Regional centres. Thus the final grading is:

1 Metropolitan Centre
7 Provincial Centres
20 Regional Centres and
211 Market towns, of which 42 were large.

If these towns were evenly distributed each Province would have two or three Regional centres, five large market towns and 21 smaller market towns, in addition to the dominant Provincial Centre.

Each province would include 7,300 square miles,

equivalent to a circle with a radius of approximately fifty miles (48 miles) and each Regional Centre within the Provinces would serve an area of 2,100 square miles equivalent to a circle within a radius of approximately twenty-five miles (25.8 miles) and within these the market centres would each serve 215 square miles equivalent to a circle with a radius of eight miles.

Some of the towns in the group labelled "Regional Centres" are so close to the Provincial centres that although they cannot be regarded as part of the dominant centre, yet they have no distinctly separate region. Such are Stockport and Bolton near Manchester, and Sunderland in the North Eastern Province. Bradford, however, is sufficiently important to be a definite rival to Leeds in the West Riding Region. All but two of the remaining 16 Regional Centres have regions which are clearly independent of those of the Provincial centres. Most of them are situated either in the parts of the country that are more than the average distance from the Provincial centres, or beyond the immediate region of the Provincial centres and especially in the marginal zones between the Provinces.

The ones most distant from the Provincial Centres, are Plymouth the dominant centre of the South Western Region, Norwich the centre of East Anglia, Southampton and Portsmouth the rival centres of the Hampshire Region and Hull the centre of the East Riding.

The others are on the margins of the Provinces; Brighton, the centre of Sussex and Reading, the centre of the Middle Thames Valley are marginal to the Greater London Region.

In fact the various regional centres are no more uniform and symmetrical in distribution than they are in importance and the uneveness of the distribution of the various types of regional centre is illustrated by the following maps.

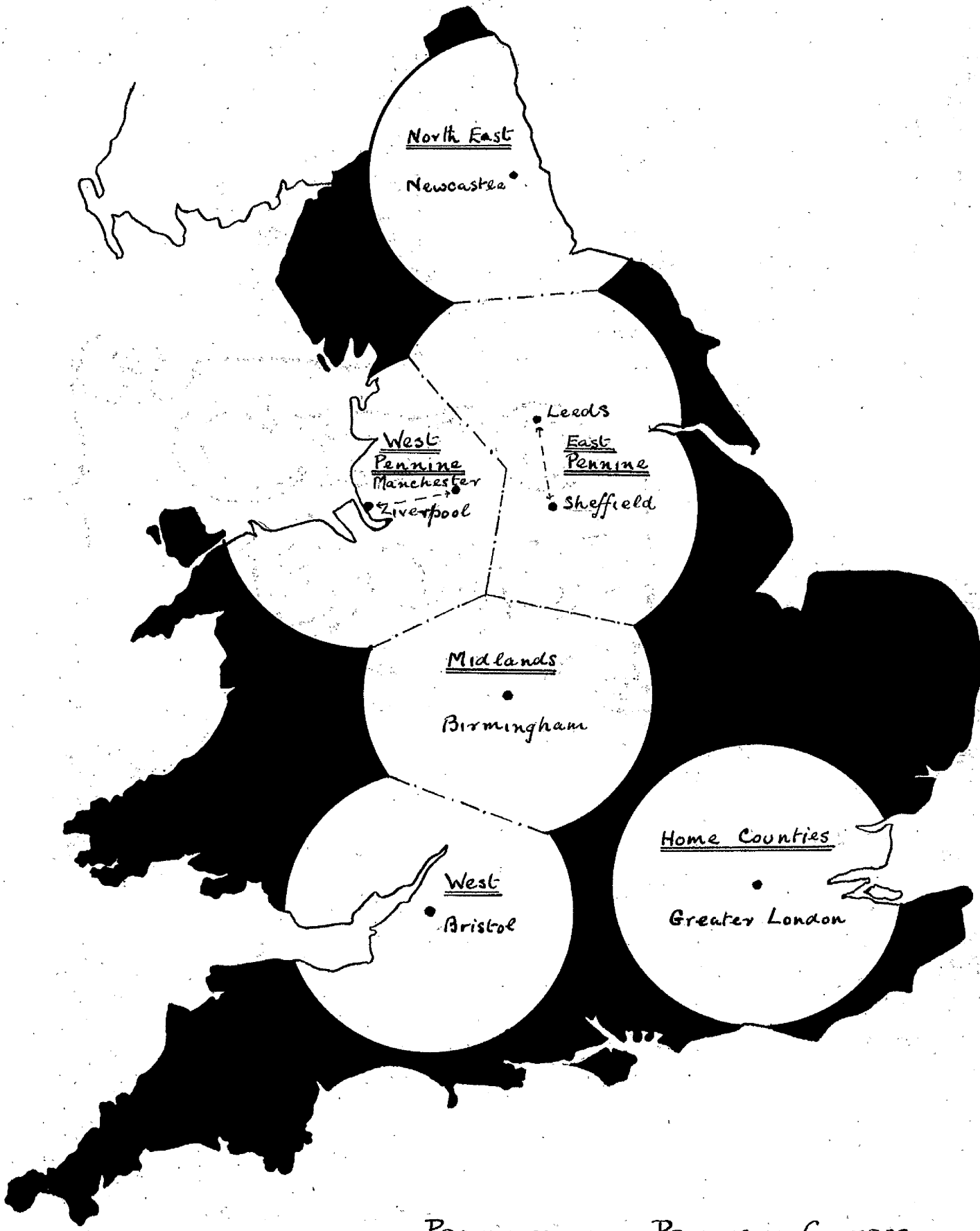
(Fig. 101)

The first map shows circles of 50 miles radius around London and the seven Provincial centres. There are four large areas which are more than the average distance from one of these major centres: the North West, Central and West Wales, the South Western Peninsula and Eastern England.

The four centres which have the most distinct provinces are Newcastle in the North-East, Birmingham in the Midlands, Bristol in the West and London in the Home Counties. In the more crowded industrial areas adjacent to the Pennines, which are extensive and without any sites of outstanding natural nodality, no single centre has been able to attain a clear dominance; Leeds and Sheffield are the rival centres of the East Pennine Province and Manchester and Liverpool of the West Pennine Province.

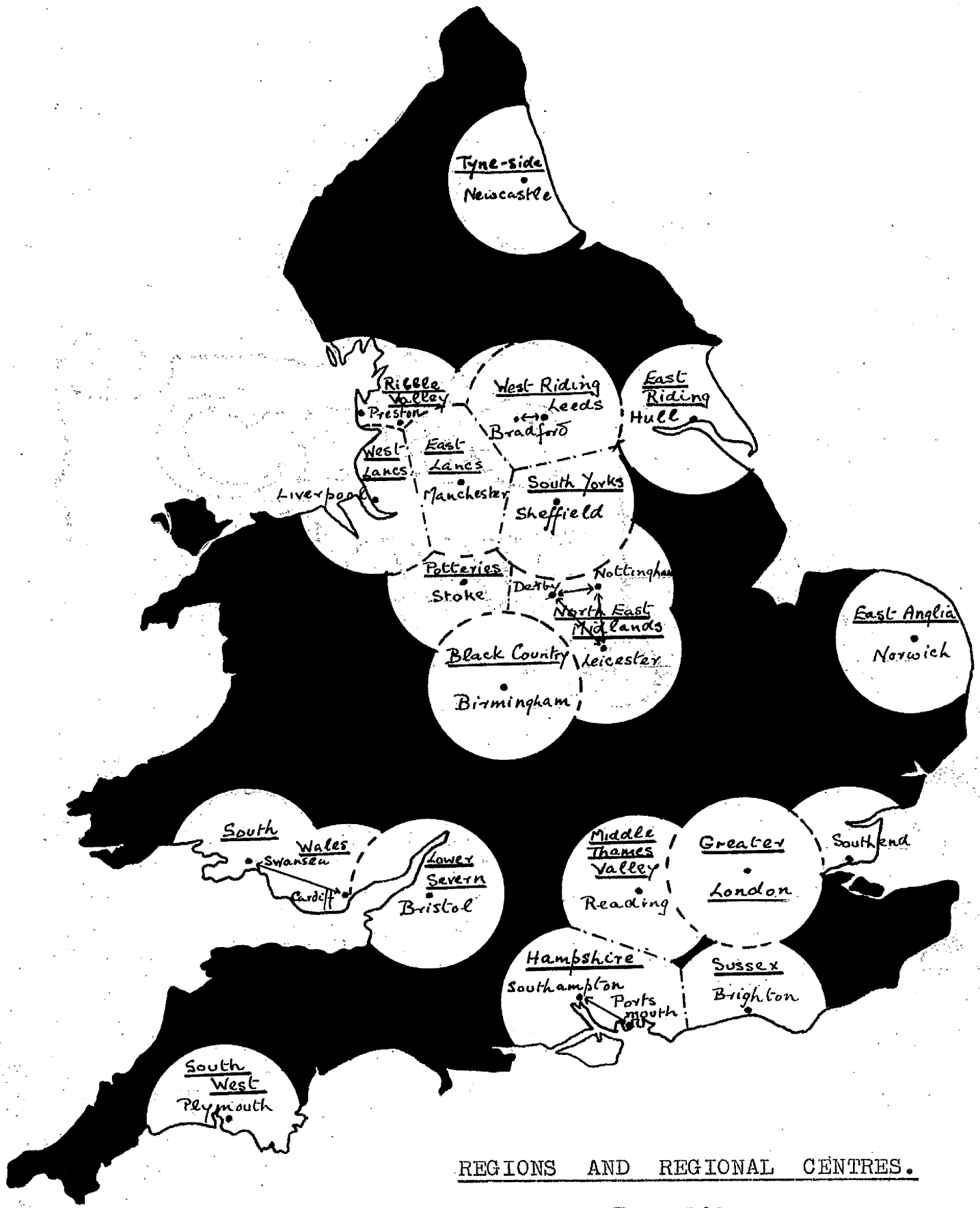
(Fig.102)

On the second map circles of 25 miles radius have been drawn around the seven Provincial centres and the twenty Regional Centres. Each of the Provincial centres has its own immediate Region; Newcastle is the centre



PROVINCES AND PROVINCIAL CENTRES

Fig. 101



REGIONS AND REGIONAL CENTRES.

Fig. 102.

of Tyneside, Leeds of the West Riding, Sheffield of South Yorkshire, Manchester of East Lancashire, Birmingham of the Black Country, Bristol of the Lower Severn Valley whilst Greater London occupies nearly all of its immediate region: Cardiff and Swansea the rival centres of South Wales are on the margin of the Bristol Region, and Preston, the centre for the Ribble Valley Industrial Region lies just beyond the Liverpool and Manchester Regions. There is a remarkable group of Regional centres between the Black Country and the South Pennines: Stoke, the centre of the Potteries, and Nottingham, Leicester and Derby, the three rival centres of the North East Midlands.

The two remaining towns in this Grade are Southend on Sea and Blackpool, but they do not seem to have any adequate regi ns to serve, and it is probable that the large number of people employed in "Regional Services" who live in these sea-side towns really represents their function as residential areas for the nearby regional centres.

(Fig.103)

On the third map the black areas are more than 8 miles from a regional centre of any sort. In most of the rest of the country the regional centres are too closely crowded to be shown by circles of the appropriate radius but the districts of some of the larger market towns are shown.

~~CONCLUSION.~~

~~The classification of the Regional centres according to their relative importance is the final step in this~~

Regional Centres.

Fig. 103.

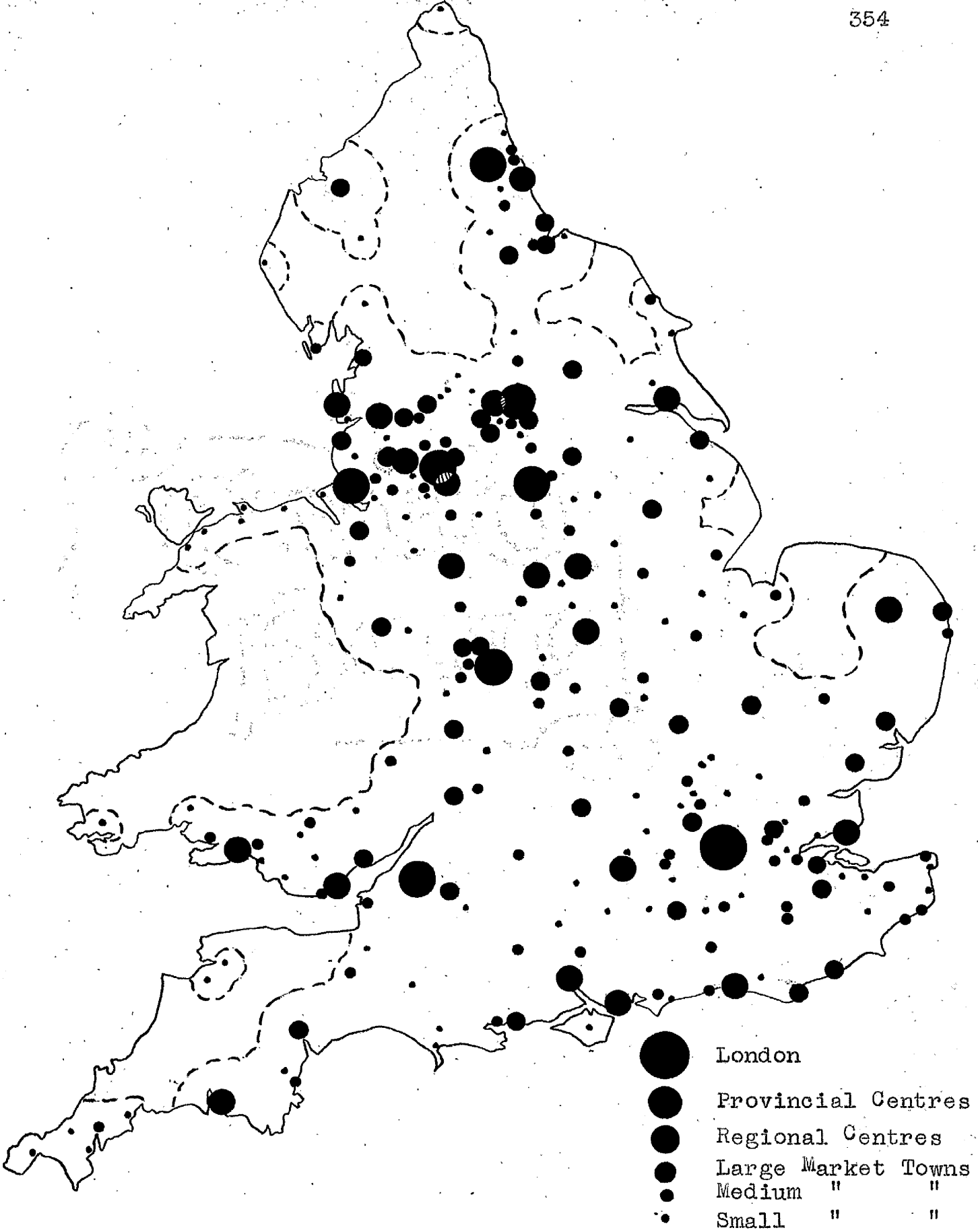

London
Provincial Centres
Regional Centres
Large Market Towns
Medium " "
Small " "

Fig. 104.

CONCLUSION

The classification of the Regional Centres according to their relative importance is the final step in this analysis of the functional types of towns in England and Wales. The results of this analysis provide the basis for a detailed investigation of the character of each town in relation to the geography of the region in which it is situated and of the relations between the individual towns and the urban organisation of the regions.

This was the object with which the investigation was carried out.

Three additional papers

by

K. H. Huggins

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THE SCOTTISH HIGHLANDS: A REGIONAL STUDY

By K. H. Huggins, B.Sc., Department of Geography,
Glasgow University

[A paper read at the meeting of the Institute of
British Geographers, January 1935]

(*With Diagrams*)

In the regional geography of Scotland the Highlands and the Lowlands are accepted terms, but they suggest a sharper and, at the same time, a more limited contrast than really exists, and their use, without further definition, has tended to obscure the realities of the fundamental division which they are intended to describe.

The late Sten de Geer [1] and Professor Sölch [2] have emphasised the fact that any geographical region derives its character, not from a single trait, but from a complex group of features or geo-factors. Furthermore, de Geer has shown that, if the distributions of the separate phenomena are mapped, a great deal of light is thrown, not only on the extent of the region, but also on the nature of its limits, whether abrupt and well marked, or gradual and indefinite, and, in the latter case, on the extents and characters of the transitional areas.

Maps can be drawn to show the actual distributions of some phenomena, or the absolute limit beyond which a particular feature does not occur. In other cases we must be content with lines marking a change in the intensity or frequency with which

* For all references see list at end of article.

the phenomenon occurs. Such lines, though of merely relative significance, can be drawn in accordance with direct numerical evidence, so that in every case we may be dealing with actual facts and with lines which have a definite meaning, consistent at all points. The choice of factors to be mapped must be made in the light of preconceived or derived ideas, but mapping is a valuable test, since the mere distribution of a factor may prove it to be irrelevant.

The object of following such a method is not to obtain a simple arbitrary boundary, within the limits of which all facts must be strained and forced. If for any reason we need such a boundary, we can draw it with a clearer knowledge of its deficiencies, of the variations of its meaning and of the different degrees of approximation to reality along its course.

The application of this method to the Highlands of Scotland exposes, and to some extent clears up the confusion that has arisen from the ease with which Scotland can be divided into geological regions, and the fact that these simple divisions do not correspond to geographical realities. The subdivision into three structural regions, the Highlands, Lowlands and Southern Uplands, is quite inadequate and misleading in a geographical sense. Even if we exclude the faulted coastlands of the Moray Firth from the "geological" Highlands, there still remains Buchan, which from a geographical point of view is closely related to the Lowlands. This has led to the creation of a geographical subdivision, North-East Scotland, within the "geological" Highlands, so that a geographer using the term "Highlands" means something more restricted than the area north of the Highland Boundary Fault. The following paper is an attempt to define more precisely the extent and character of this area.

Instead of considering the complete picture conveyed by the contrast between the Highlands and the Lowlands, let us analyse it into two component parts: the physical factors and the human factors.

A vague upper limit of altitude is usually associated with the idea of Lowland, but Highland does not necessarily imply a minimum altitude, rather the existence of high peaks, which may, however, rise directly from sea-level. Nevertheless, the essential contrast between Highland and Lowland is not associated with either of these, but with the amount of relief.

There is a complete contrast between the Highlands and the Lowlands in types of occupation and in forms of settlement. This contrast is reflected in density of population, in the size of the parish, which is the unit of organisation and administration, and, most significantly, in the pattern of settlement. In the Lowlands a pattern of evenly dispersed farms covers the area almost completely, and leaves no large gaps. In addition to the farms there are village and town agglomerations. In the Highlands the most

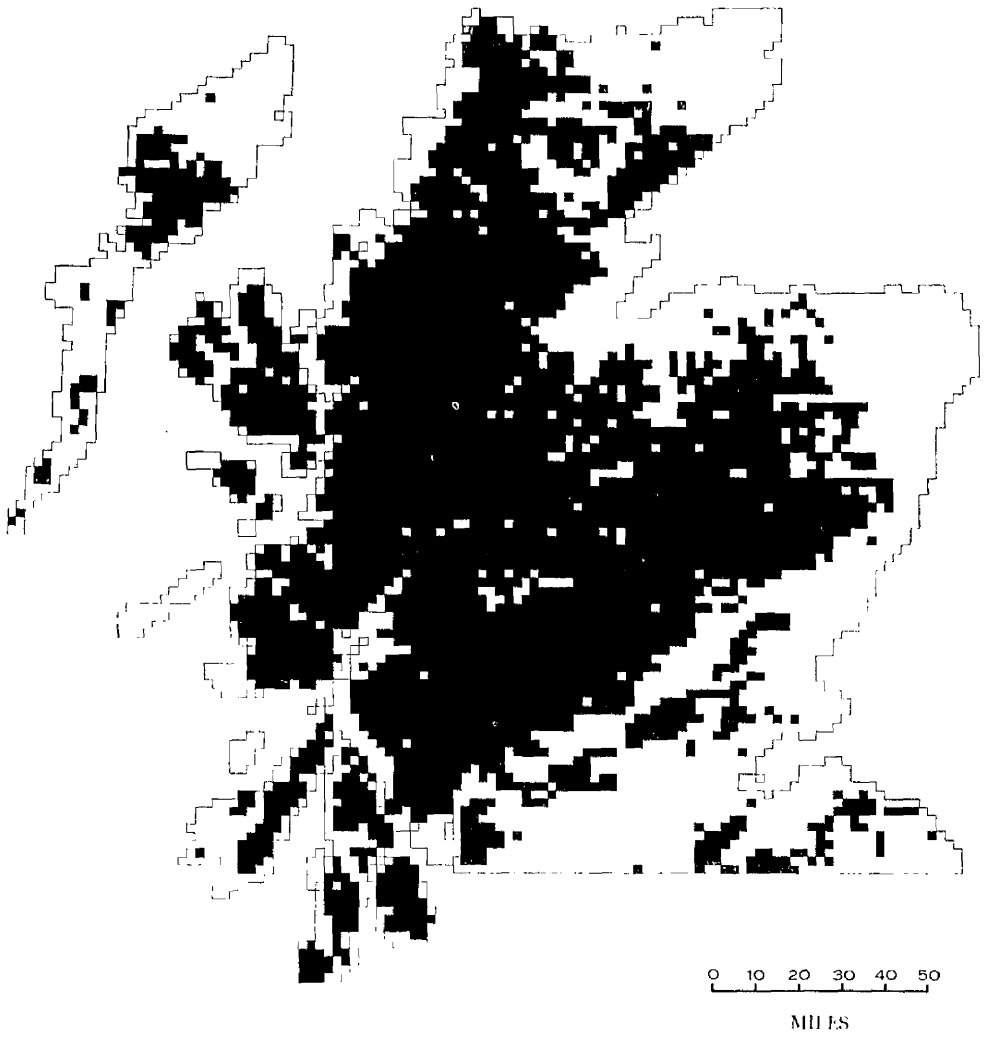
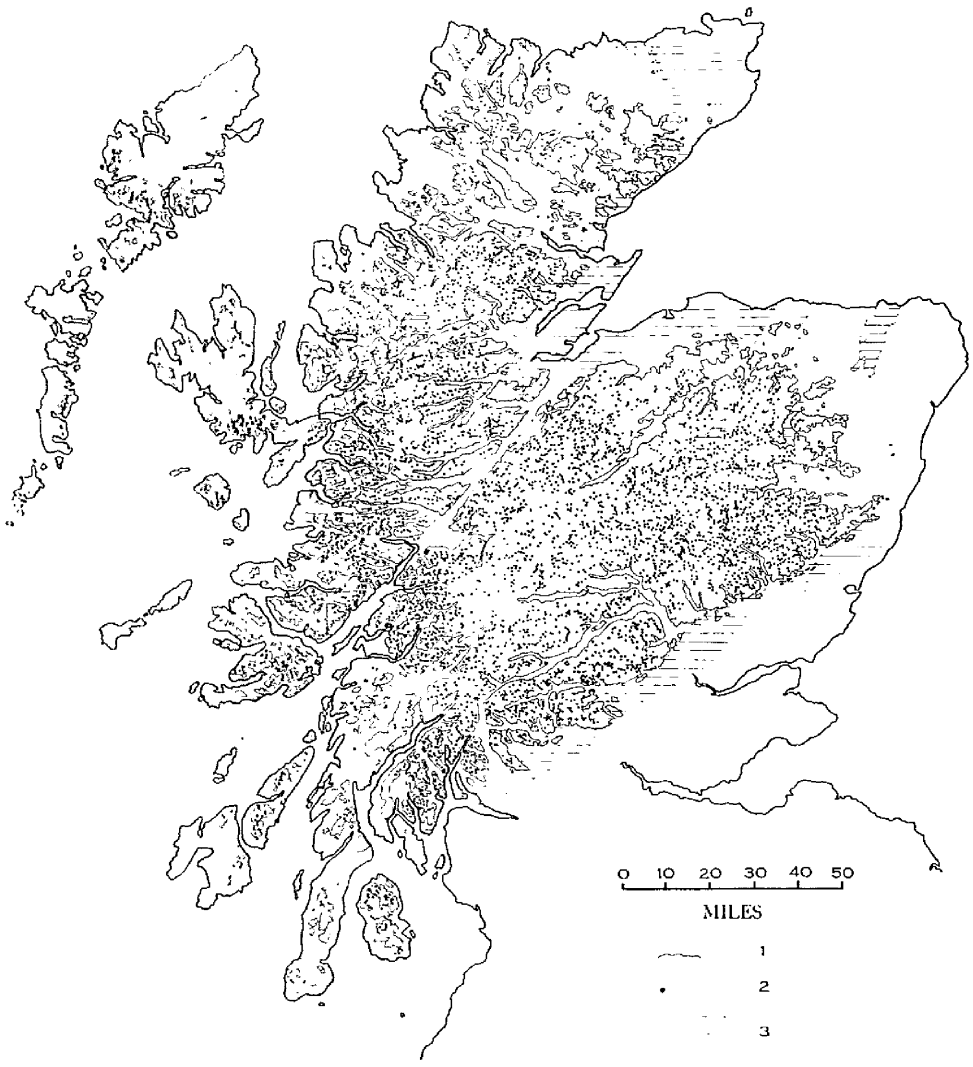


FIG. 1. Within the black squares, sides two miles, the difference between the highest and lowest points exceeds 700 feet.



1. 800-foot contour.
2. Peaks over 1500 feet.
3. Old Red Sandstone.

FIG. 2.

striking feature is the discontinuity of settlement, which tends to be confined to scattered, isolated areas, or to be restricted to a linear arrangement along valleys. Gaps in the building distribution are numerous and extensive. There are few villages and no towns, except at the margins.

In both groups of factors there is a strong contrast between the Highland and the Lowland complexes, and there is a natural tendency to assume that the distributions of the Highland physical complex and the Highland human complex are co-extensive. The maps test this assumption.

The whole area north of the Highland Boundary Fault, with the exception of the faulted coastlands along the north-west shore of the Moray Firth, is genetically and morphologically, but not stratigraphically, a unit. Metamorphic and plutonic rocks predominate, but there are unaltered Torridonian and Cambrian sediments in the north-west, and also extensive areas of sediments of the same age and character as the Old Red Sandstone deposits of the Lowlands (see Fig. 2). We can subdivide the structural unit into an inner area in which, since the period of the Caledonian folding, erosion has predominated, and an eastern fringe, in which there are still preserved patches of unaltered, post-Silurian sediments, formerly more extensive. It might be desirable to restrict the term Highland, in a stratigraphical sense, to those areas without unaltered sediments of Old Red Sandstone age or younger, but such stratigraphical separation would not be lithologically or topographically significant. The Old Red Sandstone series includes conglomerates and boulder beds of great resistance, as well as relatively easily eroded sandstones. Topographically the former may be outlying mountains on top of the metamorphic series, whilst the latter have been reduced to low relief. Consequently there is no consistent and significant correlation between the Old Red Sandstone deposits and the topography, and it is evident that, although the distribution of such deposits is of considerable local importance, it is not a factor of major regional significance.

Despite such lithological variations, the structural unity of the area north of the Highland Boundary Fault has, in times past, been reflected in a greater topographical uniformity than at present. During periods of stability, widespread peneplanes were produced, and it is believed that remnants of these are still to be seen, despite uneven uplift and the consequent redissection which has produced topographical, and hence geographical differentiation within the structural unit.

From these considerations it is obvious that any sound geographical definition of the Highlands must avoid geological criteria, whether structural, stratigraphical or lithological.

One of the simplest distinctions between Highland and Lowland is absolute altitude. It is impossible to fix any one altitude as the

upper limit of the Lowlands, but for the sake of mapping, we may choose the 800-ft. contour, which is extremely tortuous and sinuous but is valuable in two respects. Its general form (see Fig. 2) shows the extent of the block of land above 800 ft., and it is essentially a block with which we are dealing, whilst the actual detail gives some indication of the degree of dissection and of the occurrence of land at low altitudes within the Highlands.

Before discussing the features shown by this line, we may add a second aspect of topography. All summits over 1500 ft. were mapped, and their distribution, in combination with the 800 ft. contour, distinguishes between areas of rugged Highland and land which is over 800 ft. but only of slight relief. It gives a crude indication of the degree of relief, a factor of major significance. Whatever our definition of Highland may be, it is obvious that the amount of relief is a more significant distinction between the Highlands and the Lowlands than any absolute height. The figure of 1500 ft. was chosen for the peaks because, at the margins, in association with the 800-ft. contour, it indicates a difference of altitude of about 700 ft., and from specimen areas this was judged to be a reasonable degree of relief for distinguishing Highland from Lowland.

Let us see what is shown by these two relief features as to the extent of land that can be regarded as Highland in a topographical sense, that is to say, characterised by both high altitude and many peaks; a combination which is a presumptive indication of high relief.

The wall-like character of the south-eastern margin needs no further emphasis. In Fig. 2 it is reflected by the straightness of the 800-ft. contour, apart from the re-entrants of narrow valleys, and the abruptness by 1500-ft. peaks just within the margin, and by the fact that there are few outlying hills and no basins within the higher area. These are cartographic reflections of an abrupt, straight scarp, cut by narrow trenches and backed almost immediately by high peaks.

The position of the margin shows a close correlation with the Highland Boundary Fault, but even to this there are significant exceptions. A considerable area with the characteristics of Highland topography continues beyond the Highland Boundary Fault, between Crieff and Callander, where Glen Artney seems to follow the fault line, and also, the marked scarp backed by high peaks does not extend as far as the east coast, but dwindles to a much less impressive break.

The eastern margin of the Highlands, from the Boundary Fault to Glen More, is less definite. In the large triangle north-east of a line from Stonehaven to Buckie there are not even isolated hills over 800 ft. high, whilst the sinuous course of the contour south-east of the River Spey indicates a series of basins almost surrounded by higher land. The two largest basins below 800 ft. are the

Alford basin and the Tarland basin or Cromar district. Higher basins are shown by a gap in the distribution of peaks, and others, smaller and still higher, are not identifiable on the present map. In this area the outcrop of the Old Red Sandstone shows no relation to the margin.

The map is fulfilling its object, which was to reveal the realities of regional differentiation rather than to fix a hard and fast boundary line. It also illustrates the well-known fact that a large extent of what is structurally and lithologically Highland is topographically Lowland.

South of the Moray Firth the contour line is fairly straight, especially west of the wide Spey valley, but the high peaks lie some way back from it. In this area the map suggests neither abrupt rise, nor sudden change of relief, but, on the other hand, it shows no intermingling of two contrasted types, as in the region farther east.

North of Glen More, from Beauly to Dornoch Firth, there is again a steep, continuous, well-defined margin, broken only by narrow, trench-like valleys. The height of the peaks, such as Ben Wyvis, the abruptness and continuity of the scarp and its relation to a fault, cutting off lowlands of Old Red Sandstone, form an almost exact equivalent to the margin along the Highland Boundary Fault.

The country north of a line from Dornoch Firth along Strath Oykell to Ullapool on Loch Broom presents a more difficult problem. The downfaulted strip is continued along the east coast to Helmsdale, but it is so narrow that it is only a detail in an area in which the major features are more complicated than elsewhere. Along the west coast there is a wide but variable zone under 800 ft. high. Inland from this, is a relatively narrow zone of high peaks. East of this again, a large proportion of the area is under 800 ft., and the peaks are in a few groups and do not represent stretches of continuous Highland. North-east of a line from Scaraven to Ben Laoghal (Loyal) there is scarcely an eminence above 800 ft., and the land is of almost uniformly moderate altitude and moderate or low relief, but it is divided neatly into two by the outcrop of the Old Red Sandstone. In the field, nothing could be more striking than the isolation of the peaks of Scaraven, Morven, Ben Graim More and Ben Graim Beag, rising above the monotonous lower country that flanks them to the north. The change from the Old Red Sandstone to the Highland rocks is marked only by a change in the detail of the relief; from smooth slopes, which have been produced by erosion on sediments in which there are only minor variations of resistance, to knobbly relief, produced where there are marked local variations of resistance. Despite the intricate detail of the latter type, the range of altitude is small. Clearly, in this northern area there is room for the play of opinion in deciding how much may be called Highland for topographical reasons.

Fig. 2, although drawn for a different purpose, has been used to a certain extent as an indicator of the amount of relief. Fig. 1 shows this more accurately. The diagram is based on the grid of 2-mile squares which is superimposed on the 1-in. Ordnance Survey maps (Popular Edition). All squares in which the difference between the highest and lowest points exceeds 700 ft. have been blackened. The confirmation of the deductions drawn from the other map is striking. It shows the extensiveness and continuity of the main area of high relief and also, on the eastern fringe, the unbroken areas of low relief, which are far larger than any geological outcrop. In Aberdeenshire, we see again the complicated interpenetration of two different grades of relief and, more clearly than in Fig. 2, the order in the complexity of the extreme north, especially the intermediate character of south-eastern Sutherland, where mountain masses rise above extensive areas of low relief.

The next task is to map the distribution of the separate characteristics of Highland settlement so that we can find the extent of the complex of human factors, just as we found the extent of the complex of physical factors. Then we can see if the two coincide.

The distribution of population is one of the most difficult problems that geographers are called upon to study; chiefly because of the lack of a satisfactory technique of mapping. The distributions and lines in Fig. 2 are absolute, but in dealing with the distribution of population we can only map differences of intensity, not absolute distributions.

The essential difference between the Highland areas and the regions which abut on them is that, in the latter, the surface is almost completely occupied by a pattern of evenly distributed farms, with or without nuclear villages, whilst, in the Highland areas, settlement is discontinuous and very restricted. This difference is most simply reflected in the average density of population in the parishes. In dividing off any area by a line of relative intensity, the usefulness of the line depends on the significance of the value chosen as the criterion of division. The densities of population in the parishes north of the Highland Boundary Fault fall clearly into two groups. The majority of the parishes have a density of less than 2 persons per 100 acres (13 per sq. mile), whilst the parishes without wide stretches of uninhabited land usually have more than 7 persons per 100 acres (45 per sq. mile). There are comparatively few parishes which include both types of country, and consequently intermediate densities are rare. If we divide off all the parishes with less than 5 persons per 100 acres (32 per sq. mile), the choice is not quite so arbitrary as it might seem at first sight (see Fig. 3).

Similarly, there is a marked contrast in the size of the parishes. In areas with a sparse population the parishes are large, almost without exception over 20,000 acres, whilst, in the Lowlands,

few parishes approach this figure. The distribution of parishes over 20,000 acres has been mapped (Fig. 3). It will be seen that in its general features the limit corresponds very closely with the previous line. In spite of the arbitrary character of the actual courses of these two lines, which follow the vagaries of the parish boundaries, they do show the extent and coherence of the region of sparse population and large parishes.

The exceptionally large population of the wide lower valleys of the Spey and Tay appears as a density above the normal for the Highlands, spread over the large parishes which adjoin the rivers on either side. Consequently, the map produces a deceptive impression of wide embayments of settlement of Lowland type.

We need a line of separation that is free from the irrelevant details of parish boundaries. A dot map provides a method of obtaining it. Despite its deficiencies, the map of the rural population of northern Scotland (Fig. 4), constructed with a unit dot representing 100 people, shows clearly the contrast between the two types of settlement; between land where settlement is evenly spread and those areas where population is sparse and discontinuous. The margin of the region of continuous settlement has been transferred to Fig. 3. It conforms remarkably to the trends of the other two lines and usually lies between them. It eliminates the deceptively wide inlets at the Spey and Tay valleys. This line of separation, drawn by eye from a generalised map, could be replaced by one more accurate, derived from the 1-in. Ordnance Survey maps, by following the change from evenly dispersed buildings to the discontinuous pattern.

To assume that the topographical and human complexes associated with the word Highland are co-extensive leads to the neglect of an important point, which is illustrated by the relation between the limit of continuous settlement and the topography. Now that some of the more important factors have been mapped we can examine the differences between their distributions. The two complexes are found together throughout most of the area, and wherever the topography is of the Highland type the population is sparse and scattered, but the limits of continuous settlement do not always coincide with a change of relief to the Highland type. The human complex, characterised by sparsity and discontinuity of settlement, extends beyond the limits of the topographical complex, characterised by high altitude and high relief. As is only to be expected from their close inter-relation, an almost exact correlation is to be found between the margin of the mass of moorland [3] and the limit of evenly distributed settlement, so that the coincidence between the areas of moorland and the areas of high relief is also incomplete. These facts show that the topographical conditions are not the only ones which hamper cultivation.

In Scotland, high relief automatically involves conditions of climate and soil which make cultivation over extensive areas

impossible, but it also involves local variations, so that in small scattered patches the unfavourable normals are modified and cultivation is encouraged; where a gentle slope at low altitude has lighter, warmer, deeper, more fertile, or better drained soil, or where a sheltered sunward slope has a favoured local climate. Consequently high relief is always accompanied by a predominance of moorland and by sparse scattered settlement, but these features are also found in the Moor of Rannoch where, although the altitude is high, the relief is low. They are also found in regions of low altitude and low relief, such as the region of north-eastern Sutherland and the adjacent parts of Caithness, which is moorland with typical Highland settlement. The change from continuous cultivation to sparsely inhabited moorland may be in the middle of an area which is topographically uniform. In such cases the vital changes must be in other factors, probably in soil and climate.

It will be noted that neither of these important factors, nor the distribution of glacial drift, has been considered with the physical factors. There is as yet no satisfactory map of the distribution of soils or of drift in Scotland. Climate too is difficult to appraise. Cloudy, cool summers with excessive rain make harvest uncertain, but such intangible and invisible factors are difficult to map, although the resultant limits are real and effective.

These and other unmapped variations are summed up in the results of attempts to wring a living from the land. The moorland edge, which is essentially a line of equilibrium between the colonising energy of man and the hostile forces of nature, can be taken as an indicator of the combined effect of many separate factors, for which adequate data are not available. It is liable to fluctuate with the varying pressure of population, but its outline is not likely to alter much. Although it is improbable that the pressure of population is precisely the same all along this margin, the error involved in assuming that it represents equally unfavourable conditions at all points is not sufficient to nullify its usefulness.

The great differences between the subarctic moorlands and the agricultural lands are typified in the area under consideration by the contrasts between the farmlands of Buchan and the moorlands of north-eastern Sutherland and the adjacent parts of Caithness. In this case the differences cannot be summed up and explained by such crude terms as Highland and Lowland, for, although both areas are " Highland " in structure, neither is Highland in topography and in altitude, and in amount of relief the differences between them are small. In Buchan the Lowland type of settlement extends far beyond the outcrop of the Old Red Sandstone, but in Caithness the change to moorland with sparse settlement occurs in the middle of the topographically uniform Old Red Sandstone area. An investigation of the complex of physical and human factors upon which the position of the moorland edge depends, lies beyond the scope of this paper. There may be vital differences

between the soils of Buchan and the north-eastern moorlands, but since the soil is derived from the glacial drift there is no direct relation to the underlying rock. Adequate information about the distribution and character of drift may be the first step towards an explanation of the differences in utilisation between these two areas.

The convenience of grouping together all areas with sparse, discontinuous settlement, whatever their topography, has doubtless been responsible for the extension of the term Highland to include areas that are neither high nor rugged, but merely moorland of moderate elevation and moderate relief. The name, however, suggests that the topographical features are the essential characteristics of the region, although the common inclusion of north-eastern Sutherland and the adjacent parts of Caithness contradicts this.

The moorland edge is not only the limit of the Lowland type of settlement ; it can also be used as a boundary between Highland and Lowland types of land utilisation, since the former is characterised essentially by the existence of an overwhelming proportion of moorland. Thus one line separates regions of contrasted vegetation, contrasted agriculture and contrasted settlement. If relationship to the largest number of phenomena is the test of geographical significance, this is the fundamental line in the geography of northern Scotland, whilst the factor of relief is much less important and must be considered merely as a secondary, differentiating feature within the northern area of subarctic moorland ; a factor which, although it does not extend everywhere to the limit of the major region, is present over most of the area as an additional handicap to those reflected by the presence of the moorland.

The maps have been extended to include the western islands so that their relation to the Highlands may easily be seen. In some cases, such as Mull, Jura, eastern Islay and eastern Skye, there is an obvious continuation of the characteristics of the adjacent parts of the mainland across a narrow strait. Other parts, such as Rhum and western Skye, although structurally different, are similar to the Highlands in topography and settlement. Coll, Tiree, northern Lewis and many of the smaller islands, although of low relief, are largely moorland.

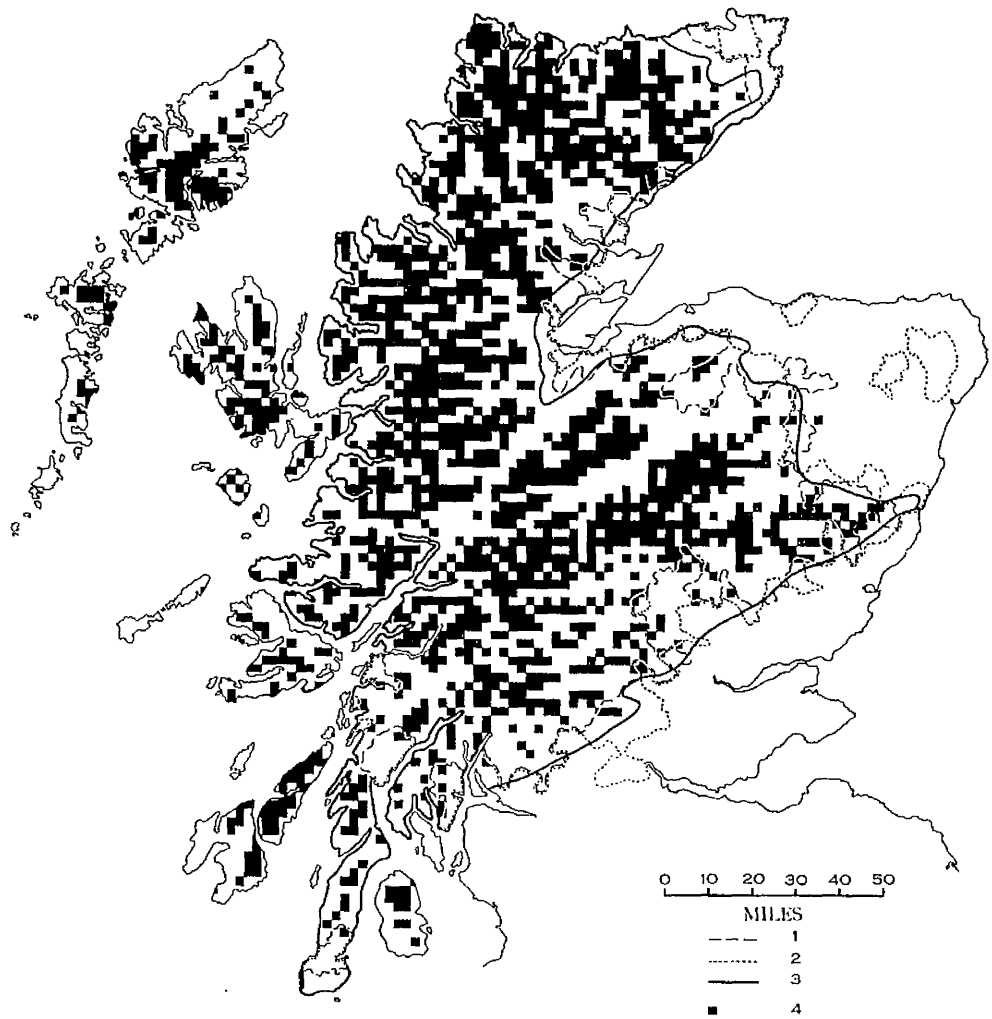
The maps also show, in a general way, the very important variations to be found within the Highlands. Apart from the characteristics of the marginal areas, which have already been discussed, the following regions are clearly shown by Fig. 2. South of Strath Oykell and north-west of Glen More is a region with groups of high peaks separated by many long, low, narrow, parallel valleys, fringed on the west by a fiord coast, which continues across Glen More to upper Loch Etive. South of Glen More the bulk of the country consists of the relatively little dissected massifs of Monadhliath and Cairngorm, separated by the wide Spey valley.

The southern margin is deeply dissected by short, separate glens in the east, and in the west by longer valleys, grid-like in pattern, belonging mainly to the Tay system. This area abuts on the fiord country of the south-west, between Loch Lomond and Loch Fyne, where massed groups of high peaks are separated by short, branching glens. Fig. 2 brings out the different nature of the land west of Loch Fyne and south of a line from the head of that loch to the elbow of Loch Etive. There are large areas under 800 ft. and few peaks of 1500 ft. These characteristics are most marked west of Loch Awe, and the boundary of the region is particularly clear against the Ben Cruachan massif to the north. Nevertheless Fig. 1 shows that even here the amount of relief is consistently higher than in the Lowland areas and that the region forms part of the main mass of the Highlands, whilst still farther to the south-west there is a more dissected region, some parts of which are joined to the mainland, whilst others form the islands of Islay, Jura and Arran.

There are also broad regional contrasts in settlement, which in the Highlands is confined to a zone between an outer limit, beyond which farms are widespread instead of being restricted to scattered, favoured areas, and an inner or upper limit set by sub-arctic conditions. In the interior of the larger massifs there are extensive continuous areas without any permanent habitations, or even buildings to serve as temporary shelters. An attempt has been made to show the proportion and extent of such areas by mapping from the 1-inch Ordnance Survey maps (Popular Edition), all the 2-mile squares that are without buildings of any sort. The result (Fig. 3) is, of course, extremely irregular, but, in view of the difficulty of defining uninhabited land, it seems to be a method of approaching the truth and indicating the larger continuous areas without buildings, and also the degree to which settlement penetrates into different parts of the Highlands. It would be possible to extend these areas and to obtain a closer approximation to the truth by adding smaller marginal squares.

The continuity of the larger areas is broken, somewhat irregularly, by isolated temporary shelters placed in the middle of otherwise empty spaces, boat-houses on the shores of fishing lochs, bothies and shielings in remote valleys or even at high altitudes.

One striking feature, which has already been discussed, is that in the extreme north-east, where the relief is comparatively low, areas of uninhabited land are very continuous, so that discontinuity of settlement is very marked where the topographical characteristics of the Highlands are absent. From Strath Oykell to Glen More, although there is a large proportion of land unoccupied, it is not in large continuous areas. Just as the mass is fragmented by valleys, so the unoccupied land is fragmented by the penetration of settlement along the valleys; the texture of settlement is comparable



1. Margin of parishes with less than 5 people per 100 acres.
2. Margin of parishes over 20,000 acres in extent.
3. Limit of sparse, discontinuous settlement, Highland type. Cf. Fig. 4.
4. Devoid of buildings.

FIG. 3. The coast line is thickened where both Line 1 and Line 2 coincide with it.

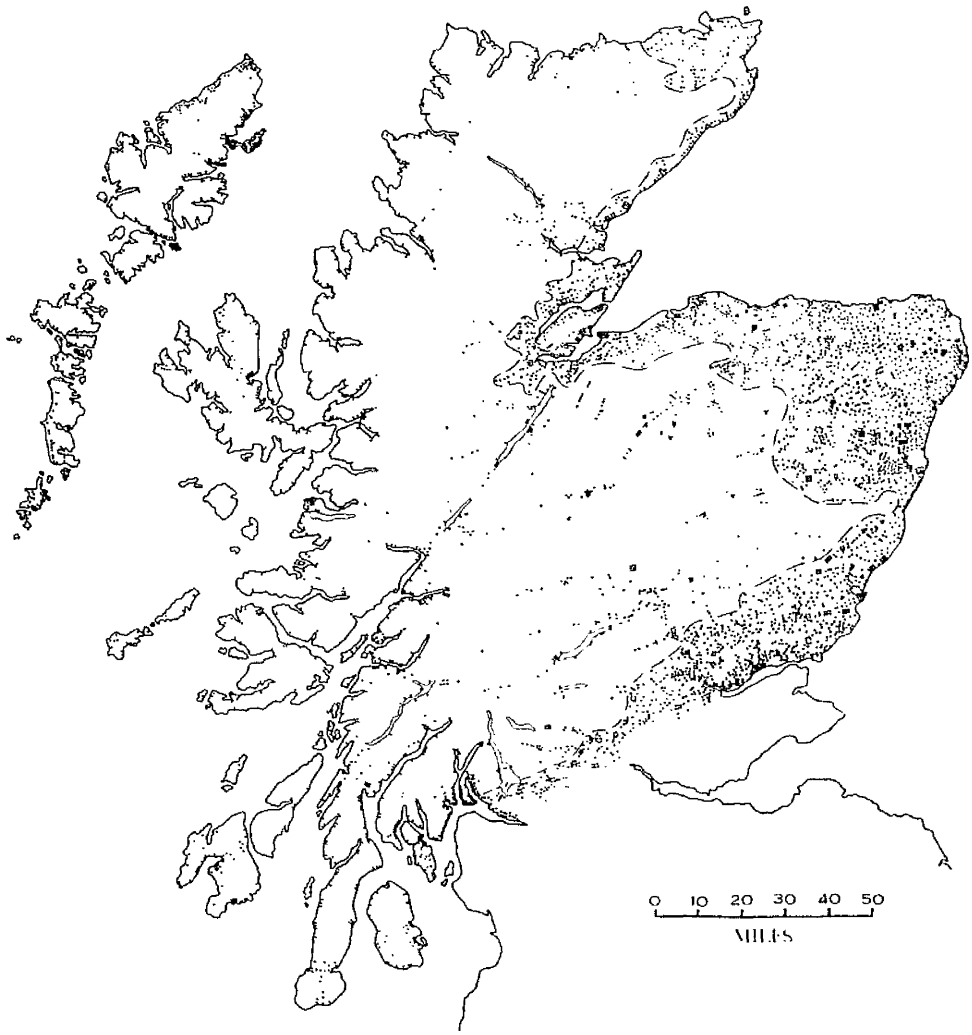


FIG. 4. Rural population of northern Scotland. Each dot represents 100 people. Urban groups of over 1000 people have been excluded. The line marks approximately the boundary between sparse, discontinuous settlement, Highland type, and evenly scattered settlement, Lowland type.

to the texture of dissection. The desolate massifs of Monadhliath and Cairngorm stand out, separated by the wide zone of settlement along the Spey valley. Along the south-eastern margin there is a much closer texture of settlement and there are few large, continuous areas without buildings. Lorne is remarkable for the fact that the population appears to be less restricted than in other areas, although there are no sea lochs to introduce intrusions of coastal population, as in the case of the massifs of Cowal.

These then are the chief types of relief and settlement that go to make up the regional pattern of the Highlands. Further explanation of their characteristics needs much more detailed study, both on maps and in the field. The preliminary examination has provided a frame into which further details can be fitted and from which areas for field study can be chosen on the basis of their significance.

[1] S. de Geer, *Das Geologische Fennoskandia und das Geographische Baltoskandia. Geografiska Annaler*, 1928, pp. 119-139. Generalstabens Lithografiska Anstalt, Stockholm.

[2] J. Sölch, *Die Auffassung der "naturlichen Grenzen" in der wissenschaftlichen Geographie*, Universitätsverlag, Wagner, Innsbruck, 1924.

[3] The 1-inch maps of the Ordnance Survey distinguish moorland from improved pasture and arable land. This feature, with the addition of lochs and forests, reduced from the Ordnance Survey maps by Dr. H. J. Wood, is reproduced as a single map in *The Agricultural Atlas of Scotland*, George Gill Ltd., London, 1931.

Reprinted from GEOGRAPHY, *September*, 1936.

LANDSCAPE AND LANDSCHAFT.*

K. H. HUGGINS.

LANDSCAPE and Landschaft are the key words of two convergent, but still separate, sets of ideas, and they are far from synonymous. The German word "Landschaft," even in its everyday use, has, in addition to the meaning of scenery or its representation, another sense which is associated with an area, with definite (political) limits. It was introduced into geography when the unit of description was the State, and the "Landschaften" were the smaller administrative units within the States. From the first, the dominant connotation of the word in geographical literature has been a small, definite, regional unit, and this meaning has remained fundamental, despite changes in the current ideas of the nature of geographical units. In Germany, as in Britain, geography has long broken away from political and administrative divisions as the exclusive regional units, and is striving to find a regional unit which is peculiarly its own, but comparable in its objective existence to the fundamental units of the other sciences. As ideas of the nature of geographical regional units have developed and changed, so the meaning of the word "landschaft" has altered too; from an area limited by political and administrative boundaries to one defined by a single physical factor, later, to a natural region with its physical characteristics as homogeneous as possible, and more recently to a region which, when all its aspects, physical and human, are considered, is characterised, not necessarily by uniformity, but by an integrated unity. This new concept, which has revived the term "landschaft," is still indeterminate and controversial, but, despite this, Bürger, who has traced its development, regards it as the most important in modern German geography, because he sees the still unfinished struggle to find a truly geographical regional unit as a fight for the validity of geography as a science.

As long as geographical research into regional units was based on cartographical analysis the course of improvement seemed to lie in increasing the number of factors plotted, but this does not always lead to an increase of significance, since several factors may be essentially the same, and summation, cartographically or otherwise, involves the assessment of the relative importance of different categories of factors. There is more unity in any region than can be attained by mental synthesis, and it is this unity which must be studied directly by the investigation of the distribution of those phenomena, simple in themselves, which synthesize the primary factors and represent a state of equilibrium between different, often incalculable and incommensurable, forces. The realisation of the

* *Der Landschaftsbegriff. Ein Beitrag zur geographischen Erdraumauffassung.* Kurt Bürger. Dresdner Geographische Studien. Heft 7. Verlag von Zahn und Jaensch Nachf, Dresden, 1935.

advantages of such a method has led many geographers to favour the investigation of the actual landscape. Consequently much regional study is now based on the description and interpretation of the pattern of the significant contents of the visible landscape of small regional units, instead of an analysis of the underlying causal factors. The primary object of investigation is the " wholeness " of the region. This is quite distinct from the separate consideration of the individual factors, even if their distributions are coincident with the limits of the region. A region characterized by functional unity, in contrast with one defined by uniformity of physical characteristics, may comprehend contrasted, complementary forms.

British geographers, though they may appreciate the value of much of the modern German literature on regional concepts, may well be appalled by its volume, and greatly thankful for such an excellent, concise, critical survey as that now provided by Bürger's pamphlet.

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PROBLEMS OF PALESTINE

By K. H. Huggins, B.Sc.

The problems of Palestine which have occupied such a considerable space in the daily press in recent times have been discussed in terms of politics : the importance of the Near East to Imperial communications, the relations of Palestine to the Arab states of the Near East, the working of the mandate and the political relations of Arabs and Jews in Palestine, and finally the problems of restoring at least superficial peace. Many of them have been given an apparent urgency, often artificially induced by the pressure of local disturbance, and in the search for quick solutions expediency has often been preferred to considerations of ultimate benefit and lasting stability. Questions have been hastily considered under a barrage of press propaganda from interested parties. Under these circumstances even Royal Commissions have not escaped the attraction of facile solutions which have proved on more mature consideration to be unworkable.

It is not the purpose of the present article to consider the immediate political problems, but to examine the conditions which lie at the root of these problems by surveying the major changes which have taken place in Palestine since the end of the War, particularly the changes in the number and composition of the population, and those in agriculture, industry and transport.

The fundamental cause of many of the problems of Palestine is that the population has almost doubled in less than twenty years. There can be few countries in history in which this has happened at all, let alone in a country in which for the previous two hundred years the population had remained more or less stable. This increase of population and the problems arising from it are popularly attributed entirely to Jewish immigration, although the most superficial consideration of the facts shows that this is not the case. The increase and change in composition of the population between

the first Census under the British Administration in 1922, and the estimated population in July 1938, are shown in Fig. 1. It will be seen that out of the total population of about three-quarters of a million in 1922 only 84,000 were Jews, and that by 1938, when the total population was 1,400,000, the Arab population had grown from 670,000 to almost a million, mainly by natural increase, whilst the Jewish population had increased mainly by immigration to about 400,000, or 28 per cent. of the present total. The problem of Jewish immigration has come as an additional complication during a period of rapid increase in the Arab population.

This rapid increase of the Arab population has been attributed to the cessation of the removal of young men by Turkish conscription, and to various improvements of hygiene. Emigration to the United States has also been stopped. The official figures show that over the last fifteen years the vital statistics of the Arab population have been : births 50 per thousand, deaths 25 per thousand, and a net increase of 25 per thousand, or 2·5 per cent. per year ; a phenomenal figure.

The increase of the Jewish population has been due predominantly to immigration. The recorded immigration since 1922 is about 300,000, an average of a little over 16,000 a year, but the

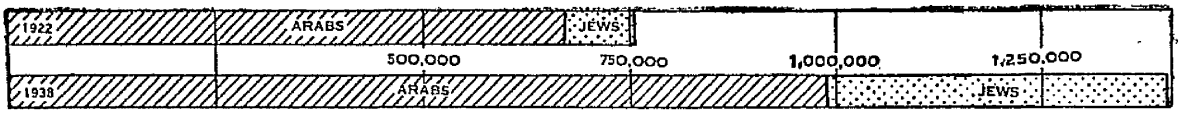

FIG. 1. Population of Palestine in 1922 and 1928.

fluctuations from year to year have been very great, and much political capital has been made out of the heavy immigration in certain years (Fig. 2). There have also been important changes in the countries from which the immigrants came and in the type of immigrant.

The Jews of Europe, as a result of historical migrations and persecutions in Western Europe, are most numerous in Poland and the western fringe of Russia. The immigrants of the early years came largely from these two countries, and it was not until after 1933 and the advent of the new regime in Germany that large numbers of Jews from Western Europe began to migrate to Palestine. Between 1919 and 1928, 100,000 Jews entered the country ; 41,000 from Poland, 27,000 from Russia and only 1000 from Germany. Since 1926 there have been scarcely any immigrants from Russia. Even as late as 1932 there were only 1000 immigrants from Germany, but in 1933 there were 5400, and since then 26·6 per cent. of the available immigration permits have been allotted by the Jewish Agency to German Jews. Since 1937 immigration has been greatly restricted. The Peel Commission recommended a " political high level " of 12,000 immigrants a year. In 1937 there were only 10,536, and the quota for the twelve months ending March 31st, 1939, is 7870.

Thus the increase of population in Palestine has not been the result of developments which called for an increased supply of labour, but, in the case of the Arabs, by an alteration in conditions upsetting the previous equilibrium of population, and in the case of the Jews, by migration from countries where conditions had become intolerable to a promised land where new means of support had to be found.

It is now time to consider the nature of the country in which these changes took place. The smallness of Palestine has frequently been emphasised. Its total area is about 10,000 square miles, or almost exactly one-third that of Scotland. Of this small area half is desert, and the size of the habitable part will perhaps better be realised from the facts that from the northern frontier to Hebron is 135 miles and from Jaffa to Jerusalem is 35 miles.

The chief regions of the country are shown in the map (Fig. 3). It will be seen that apart from the desert, which occupies the

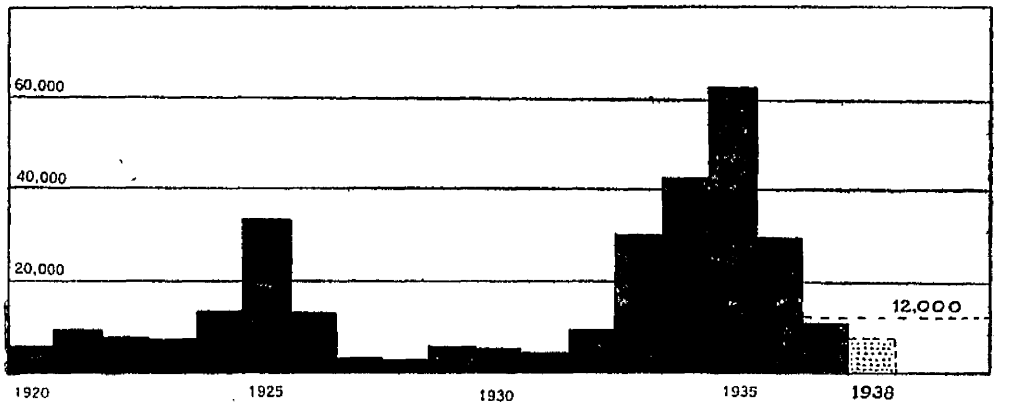

FIG. 2. Annual Jewish immigration into Palestine since 1920.

southern half of the country, the southern Jordan valley and the eastern fringe of the Judaean plateau, the country can be divided into the plains and the central upland; the areas of these three parts are respectively 5200, 2800 and 2200 square miles. A detailed description of the character of the different regions was given by Mr. Cust in a recent number of this Magazine (vol. 53, November 1937). No further description need be given here.

The desert part of the country is inhabited only by the nomadic bedouin tribes, and although it amounts to half the area, the total number of inhabitants is about 55,000, less than 5 per cent. of the present total, and only about 10 per square mile. It is probable that the number has not changed greatly in the last twenty years, although the estimate of the 1931 Census was lower than that of 1922.

In the Beersheba district, where the soil is good, some land is cultivated although the rainfall is so low and so irregular that in only two years out of seven is there a good harvest, and in two years the crops fail completely. Apart from this gamble on the rainfall,

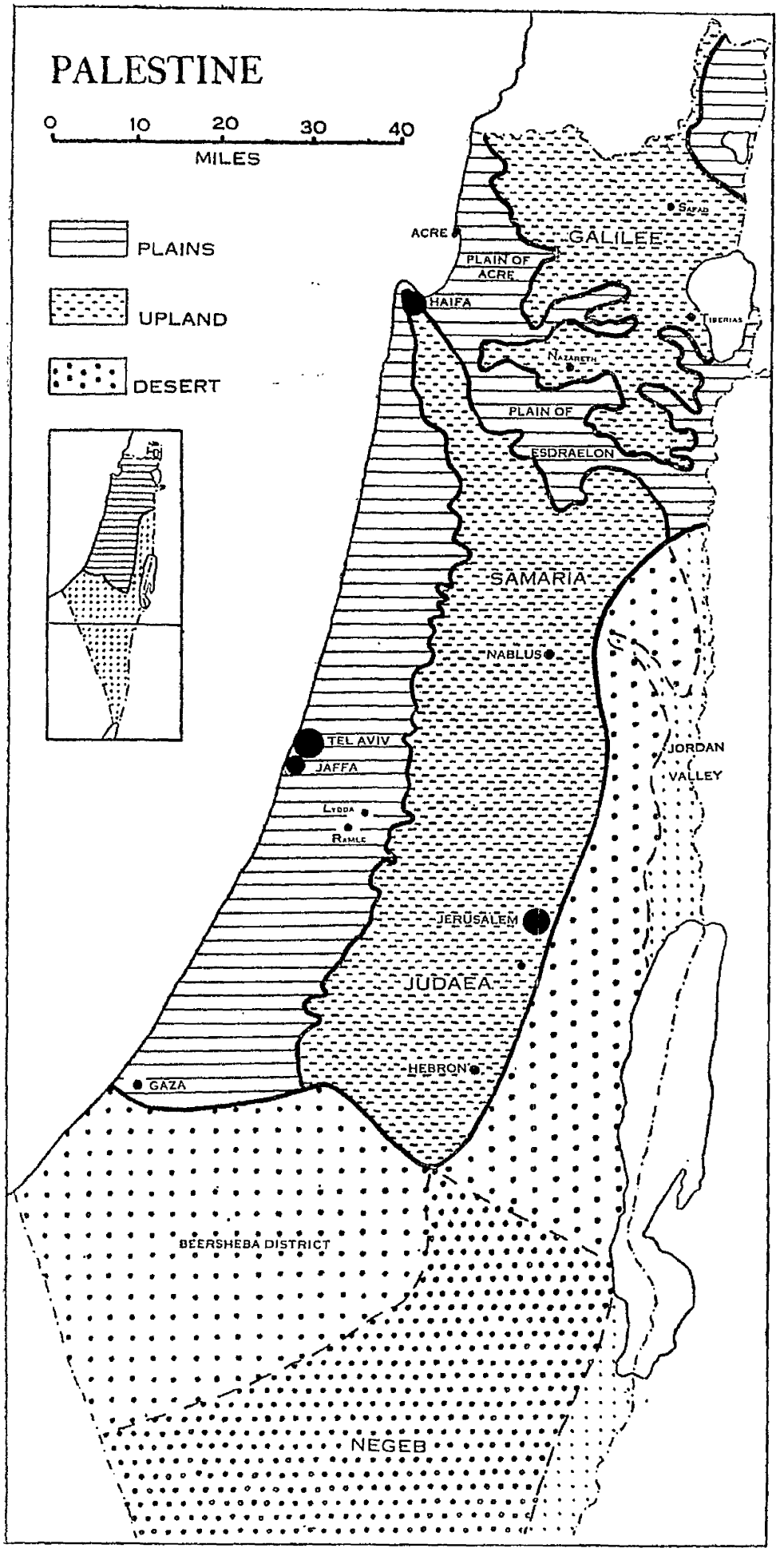
PALESTINE
0 10 20 30 40
MILES
PLAINS
UPLAND
DESERT
ACRE
GALILEE
PLAIN OF ACRE
HAIFA
TIBERIAS
NAZARETH
PLAIN OF
ESDRAELON
SAMARIA
NABLUS
TEL AVIV
JAFFA
JORDAN VALLEY
LYDDA
RAMLE
JERUSALEM
JUDAEA
HEBRON
GAZA
BEERSHEBA DISTRICT
NEGEB

Fig. 3.

the nomads depend on their herds of camels. In the summer months, when the pastures of the south are dried up, they move to the northern parts of Palestine where they have traditional rights of grazing on the wastelands, the fallows and the stubble of the crops. This migration has always been accompanied by friction between the nomads and the settled cultivators, and such friction has become more severe in places where the settled population is not Arab and the new methods of agriculture leave no room for pasture.

At least 90 per cent. of the population of Palestine has always been concentrated in the other two regions : the uplands and the plains.

Until after the War, farming was carried on chiefly by the traditional Arab methods. On the thin soil of the stony terraces of the arid limestone uplands, the Arab peasantry cultivated winter

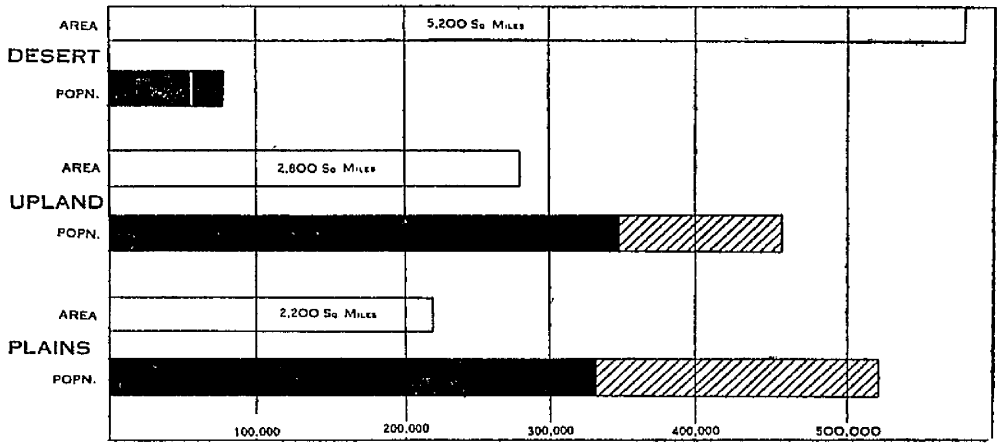

FIG. 4. Areas of the Major Regions of Palestine and their populations in 1922 (solid) and 1938 (hatched).

crops of wheat and barley and summer crops of millet, and supplemented these with olive trees, almond trees and vines, which thrive on even stonier land than the grain crops.

In relation to their potentialities the plains were not so well cultivated. Large parts of them were flooded in winter, and marshy and malarial in summer. Villages were more common at the edge of the hills than in the plains, and many of the smaller plains were used as supplementary areas by the hill villages and were not independent areas of settlement. The drier parts were used as summer pasture, or cultivated for summer crops, but there were few olive trees or fruit trees, and only a few patches of orange grove and vineyard as fore-runners of the change that was to come. Even in 1922 there were more people living in the uplands than in the plains (Fig. 4).

The change in the value of the plains has been the result of the introduction of entirely different systems of cultivation, especially the intensive cultivation of orange trees, which need irrigation.

High returns can only be obtained after the expenditure of a large amount of capital on providing irrigation facilities and in planting the trees and caring for them until they reach maturity and begin to yield.

All the plains are not equally suitable for the cultivation of the orange. The most suitable area is the western half of the coastal plain from Mount Carmel in the north to a line about half-way between Jaffa and Gaza in the south. There the soil is light and sandy, and water can be obtained almost everywhere by pumping from wells at depths between 30 and 300 feet. In the other plains, Acre, Esdraelon and the upper Jordan valley, the soil is heavier and much less suited to the cultivation of oranges, although grapefruit thrive.

The reclamation of these plains has been largely the result of Jewish enterprise, indirectly as well as directly. The Jews converted areas of poor grain land, and completely waste land, into highly productive orange groves. This set an example, and at the same time the large sums of money they paid for the land provided the Arab landowners with the capital necessary for the conversion of the lands they retained for themselves, so that approximately one-half the present area of orange groves is owned by Jews and one-half by Arabs. The total area of orange groves is quite small, only about 120 square miles. Although one expert believes that there are another 80 square miles of suitable land, the problem of finding markets for the present production, which was 12 million cases in the 1937-38 season, is sufficient to discourage any large extension in the immediate future.

The Jewish settlements in the northern plains are not based on the cultivation of oranges, but on the production of grain, fodder and cattle. Although by improved methods they have greatly increased the output of these areas, the economic basis of this intensification is more doubtful.

The increase of output has led to much discussion of what is called the " lot viable," the amount of land necessary to support a family at a reasonable standard. The idea is simple, but in practice its application involves great difficulties with unknown and variable factors : the character of the land, the system of farming, the price of crops and the definition of a reasonable standard of living. The confusion has been enhanced by the fact that some of the estimates have not been made disinterestedly, but with the object of justifying or opposing immigration. For the present purpose it is best not to enter into such theoretical and controversial considerations, but to study the actual conditions and recent changes.

In the uplands the Arab peasant population had apparently been fairly stable for two hundred years. In these areas, as elsewhere, the population has been increasing rapidly since the War.

To maintain even the poor standard of living to which the Arab

peasantry are accustomed it is necessary either to extend the area of cultivation or to increase the yield from the area at present cultivated. Neither of these things has in fact been done, and it is difficult to believe that they could be done on any significant scale. Almost every patch of soil, however stony, is cultivated, and even the steepest and rockiest slopes are terraced to retain the soil for olives and other tree crops. The hills are not suitable for the cultivation of oranges and there is no water available for the irrigation of this or any other crop. The few small Jewish settlements that have been established in the hills have only 4100 inhabitants. They have been based on a highly artificial system of dairying to supply the Jerusalem market, and apart from the inherent difficulties the scope for this is very limited.

Consequently, without any significant Jewish immigration into the rural areas, the Arab peasantry of the hill districts, who number 355,000, are suffering from the results of an increase of population in relation to the productive resources of the land. Even those families which retain their original holdings are becoming more and more dependent on income from casual labour to keep going. Almost all of them are deeply in debt to money-lenders, and there has been a steady transfer of land from peasant ownership into the hands of Arab capitalists. There has also been an increase of the landless class entirely dependent on earnings.

In the plains conditions have been quite different. There, considerable areas of land have been bought by Jews. The extent to which this has involved the displacement of Arabs is a matter of dispute, but it is probably not large. There has been a compensating advantage in the increase of employment, which is not confined to the Arab orange groves, and there is no doubt that seasonal earnings during the orange harvest in the plains provide an important supplementary source of income for many Arabs, from the hills as well as from the plain.

Jewish immigration has been opposed mainly on the ground that the best land of the country is being taken away from the Arabs. The total area of the Jewish land holdings is not large, 500 square miles, and although most of it is in the plains—the only areas of deep soil—even there two-thirds of the land still belongs to the Arabs. Most of the land was in very poor condition, if not completely waste, when bought by the Jews, and it has attained its present high value as a result of the capital and effort invested in it by them. It is admitted that the price paid for the land was in most cases far above its economic value, but it is unfortunate that the advantages of such sales accrued to a few landlords, some of them not even resident in Palestine, whilst the inevitable hardships fell on the tenants, many of whom do not believe that the landlords have any real right to sell the land over their heads.

Jewish immigration has been considered in terms of land settlement. As a consequence, much discussion has taken place on the

possibilities of settlement in such marginal areas as the Beersheba district, and the Jordan valley. Fantastic figures have been suggested. In cold fact intensive efforts to find water in the Beersheba district have failed almost completely, and the extension of irrigation in the Jordan valley would involve enormous expense for very little result.

It is highly improbable that those areas will ever carry a population much larger than they do at present. Whether that is a sound judgement or not is, however, immaterial, for land settlement plays only a minor part in Jewish immigration. Of the 400,000 Jews in Palestine, less than 60,000 (15 per cent.) are in the agricultural settlements, and of the 173,000 immigrants in 1932-36, only 29,000 went on to the land. The Jewish Problem in Palestine is essentially an urban problem, and it is a problem that will gravely trouble the Jews themselves.

The changes in the towns of Palestine have been even greater than those in the rural areas. The number of people living in the four chief towns is over three times as great as it was in 1922 ; then Jerusalem, Haifa, Jaffa and the satellite Tel Aviv, together contained only 135,000 inhabitants, or 18 per cent. of the population. In 1938 Tel Aviv alone had 140,000 inhabitants and the four towns were estimated to contain 450,000 people, or 32 per cent. of the much larger total. There are other considerable changes. Tel Aviv, which was not recognised as a separate entity in 1922, has now more people than any other town in Palestine. Haifa has considerably outstripped Jaffa, which is the only one of the four large towns that still has a predominantly Arab population. The relative size of these towns and the proportion of Jews and Arabs in them is shown in Fig. 5.

This increase in the size of the four large towns is not wholly a reflection of economic changes, but has been largely influenced by the immigration of Jews, 70 per cent. of whom live in these towns.

These changes must be viewed in relation to the pre-existing conditions. Palestine is predominantly a land of village dwellers, and most of the villages are small. A few, Safad, Tiberias, Nazareth, Lydda, Ramle and Bethlehem, have between six and twelve thousand inhabitants but are still essentially villages ; the old and decayed port of Acre, shut up inside its enormous ramparts, is no larger than these villages. Apart from the big four there are only three real towns in Palestine, each with slightly under 20,000 inhabitants. They are Gaza, on the ancient route to Egypt, and still an important market for the bedouin of Sinai and the south-west ; Hebron, the market for the bedouin of the south, and Nablus, the chief market of Samaria. Nablus is the centre to which surplus olive oil is taken to be made into soap in small factories. These three towns are almost completely Arab, and still in close contact with the surrounding countryside. They have each a few small-

The "port" of Tel Aviv, March 1938.

The difficulty of upland agriculture : terraces at Ain Karim, near Jerusalem.

Hebron, market for the bedouin of the south.

scale traditional crafts and industries, but are still essentially markets, unaltered and unaffected by most modern developments. The important changes have been confined to the four large towns.

Jaffa has changed least. It is the ancient port of Judaea, and is situated where a line of low reefs gives inadequate shelter on an otherwise unbroken sand-dune coast. The harbour is inaccessible for even the moderate-sized ships that handle the orange exports, and they have to anchor almost a mile out. For long periods in the stormy winter months the slow and complicated business of transferring goods and passengers between ship and shore by lighter is impracticable. In spite of these handicaps it was until recently the best and most important port in Palestine, and it still handles, by its inefficient methods, a fair proportion of the orange export. Its growth has not been spectacular and it remains almost entirely

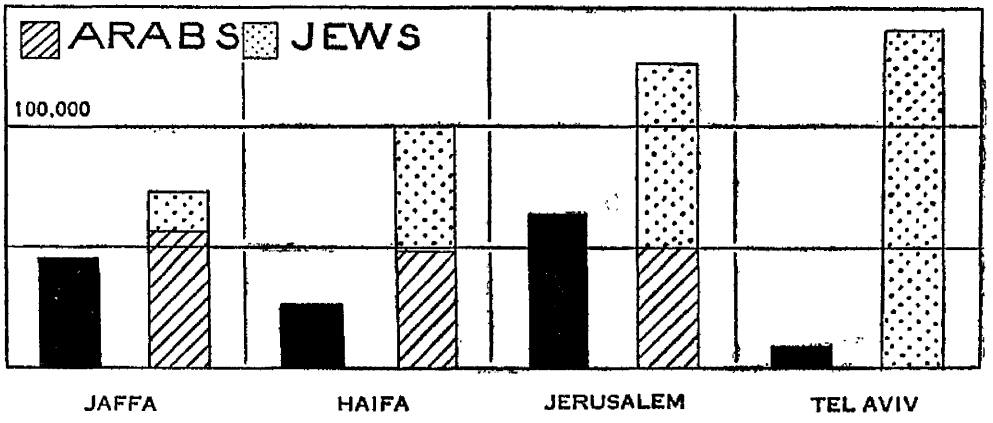

FIG. 5. Population of the four chief towns of Palestine in 1922 and 1938. Population of 1922 shown in black.

Arab in population. Its most important although not its most immediate rival is Haifa.

The other ancient port of Palestine was Acre. At the northern end of the Bay of Acre a small promontory gave some slight shelter and was an easily fortifiable site. So long as defence was a fundamental necessity, as it was in this land constantly exposed to invasion, Acre was the port for the routes reaching the coast through the plain of Esdraelon. It was used in turn by the Crusaders and the Venetians and was besieged by Napoleon and the Egyptians. Even as late as 1909, when the narrow-gauge Hedjaz railway was built from Haifa, through the plain of Esdraelon and up the Yarmuk valley to connect with the great pilgrim railway from Damascus to Medina, the branch from Acre was a very important tributary feeder.

As a site for the development of a large modern port, however, Acre is inferior to Haifa on the southern side of the bay, where below the high ridge of Mount Carmel there is deep water naturally sheltered on all sides except the north. A mile-long breakwater,

completed in 1933, provides protection from this side and a large space of water is thus enclosed. Along the landward side new quays have been built, at which the largest steamers using the Mediterranean can tie up. Behind the quays on reclaimed land there are modern transfer sheds, railway sidings and a magnificent street of shops and offices, the Kingsway. This new harbour is used by the weekly Italian steamers which maintain the regular service via Cyprus to Brindisi, Trieste and the rest of Europe. The water of the harbour is so sheltered that it is used as a landing-place for the Italian *Ala Littoria* sea-planes, which maintain the fastest air connection to Europe with services three times a week.

Haifa's communications inland have been improved since the War. The normal gauge railway from Kantara has been extended right through the plain as far as Haifa, and more recently a main road has been built through the plain to Tel Aviv and Jaffa. As a result Haifa is attracting an increasing share of the orange exports from the plain, and handles the bulk of the miscellaneous imports and exports of the country as well as monopolising the passenger traffic.

All this development, which has been accompanied by a rapid growth in population, has been independent of the building of the oil pipe-line across the desert from Iraq to the shores of Acre Bay, where the terminal and storage tanks stand some three miles north of Haifa. At present the crude oil is pumped out, through flexible pipes under the sea, to tankers which anchor at buoys nearly two miles out in the bay. A scheme for a giant refinery has been projected but not yet carried out, so that the petrol consumed in Palestine is still imported in a refined state by the two great rival companies Socony (Standard Oil Co. of New York) and Shell ; the only direct influence on Haifa has been the work provided by the administrative offices of the I.P.C. (Iraq Petroleum Company) in the town, and in the repair and maintenance departments at the terminal.

In addition to the actual work of the port, the town has become the business and administrative centre for the northern part of the country and has the most solid economic basis and the brightest prospects of all the towns in Palestine. There are beginnings of industrial development. Beside the harbour rise the gigantic storage elevators of a flour milling company which grinds imported wheat. There are mills where olives and oil seeds are crushed, two cigarette factories, the repair shops of the Palestine Railways, and a large power station. A few miles east of the town, at the northern foot of Mount Carmel, which provides limestone, and at the edge of the plain of the Kishon, which provides clay, are the Nesher Cement Works, which produce the raw material from which new towns are built.

The " old city " of Jerusalem, a holy city to three great religious communities, is not to be accounted for in terms of economic geography. Sir George Adam Smith has sensed and set down as

clearly as may be those intangibles which have attracted to it, and maintained within its walls, that medley of races, religions and languages, that mixture of the spiritual and the commercial, that make it unique among cities. But what of the new town that has grown up outside the city walls ? Before the War the chief buildings outside the walls were the Russian compound, for the crowds of pilgrims from that country, a few alms-houses for aged Jews, and two short streets of shops from the Jaffa Gate to the Post Office. Beyond this to the west there are now the main streets of modern offices and shops, and the new residential quarters. The modern Jerusalem is the administrative and business centre of Palestine, but the number of people living there seems in excess of the number necessary to perform those functions, and there are no industries to provide employment.

The importance of the problem of the future economic basis of these new settlements is seen still more clearly in the case of the mushroom town Tel Aviv, the pride of World Jewry. It is essential to remember that Tel Aviv was first planned as a residential suburb of Jaffa and bears still the marks of this, although it has grown to twice the size of the older town. It is still oriented towards Jaffa and has no focus of its own. The main street, Allenby Street, runs off towards the sea at right-angles to the main road from Jaffa. But the town turns its back on the sea, although there is a partly-developed promenade. There is still no proper passenger station, just a low platform by a level crossing. This matters little, since the railways are relatively unimportant in Palestine to-day. On the other hand there is a large modern aerodrome.

As friction between Tel Aviv and Jaffa has increased there has been much talk of the port of Tel Aviv. As at Jaffa the ships have to anchor far off-shore, but two small quays have been built at right-angles to the coast to provide some shelter for the barges by means of which goods are transferred between ship and shore. Small motor tugs tow two or three barges at a time backwards and forwards, but in spite of this slight improvement (the lighters of Jaffa are propelled by sails or oars) the roadstead of Tel Aviv suffers from essentially the same disadvantages as that of Jaffa.

The rate of growth of Tel Aviv is simply a reflection of the rate of Jewish immigration. Most of the immigrant Jews stay in the towns, the majority of them in Tel Aviv. Their personal problem is how to support themselves in this new country. A considerable proportion of them are trained in one of the professions. Many come to Palestine with capital from their previous homes, for the immigration regulations have always been more generous to people bringing a thousand pounds with them than to those with less capital. Some have enough to live on, others use their inadequate capital to open small shops. But of all the professional men few can earn a living, and of the shops few pay their way and the rest linger on until exhaustion of capital brings the inevitable bankruptcy.

An influx of capital and of highly trained people should provide a basis for industrial development. In so far as the local resources and the local demand are concerned, the scope is restricted. Palestine is practically without industrial raw materials or mineral resources. Two developments have attracted attention by virtue of the capital invested in them and the value of their output : the Palestine Potash Company, which extracts valuable minerals from the waters of the Dead Sea, and the Palestine Electricity Company, which has built a great power house to harness the waters of the Jordan and Yarmuk south of Lake Tiberias. Neither of these concerns employs, or is ever likely to employ, large numbers of people. Oranges provide raw material for factories making fruit drinks and essences. There is a local demand which provides a market for factories making cigarettes and chocolates, and, on a slightly larger scale, for foundries making wire fencing for the orange groves. There is obviously no real hope to be derived from the resources of the country or the home market.

But do these exhaust the possibilities of industrial development ? Palestine can never hope to compete in world markets with the established producers in any of the major industries, particularly in those in which the costs of raw materials, power or transport are important, or which are sheltered by tariffs in important consuming areas. There are, however, many small-scale industries in which none of these is important ; in which the chief factors in success are efficiency of management and skilled labour, and for the foundation of which large capital outlay is not necessary. The possibility of the growth of such industries has already been proved. The Royal Commission quotes, with some amazement, an excellent example—a small factory producing false teeth. This example seems ludicrous enough as the solution of the most important problem for the Jews of Palestine. Most other possible suggestions would seem equally inadequate in themselves, but cumulatively such unconsidered trifles might be built up, to provide a wide variety of minor industries for which the abilities and training of the people are specially suited. A community which based its prosperity on the skill and adaptability of its members might find in that a secure basis, and avoid the sudden fluctuations of fortune which afflict highly specialised towns which depend for their prosperity on one of the major industries in which competition is fiercest and the slumps deepest and most frequent.

The problem of finding a permanent economic basis for the town dwellers of modern Palestine ; one that will continue after the cessation of the abnormal conditions associated with expansion, a building boom and a heavy annual import of capital, is the most fundamental one to-day. It is more important both for the absorption of immigrants, and for the ultimate stability of the Jewish population in Palestine, than are the land-settlement schemes. It is not impossible that such industrial development by the Jews,

especially if it provided incidental employment for considerable numbers of Arabs, might offer just that obvious aspect of mutual benefit which is conspicuously absent from certain of the land-settlement schemes. Such a development might ultimately lead to a diminution of tension between Jews and Arabs, to a realisation that the two peoples could live amicably side by side, and to the ultimate settlement of outstanding political problems.

TABLES.

T A B L E 1.

Comparison of Urban and Rural population in England and Wales, 1801, 1851, 1891, 1931.

	Rural Popn.		Urban Popn.		Total Popn.
	Total		Total		
1801					8,892,536
1851	8,936,800	49.8%	8,990,809	50.2%	17,927,609
1891	8,107,021	28.0%	20,895,504	72.0%	29,002,525
1931	8,000,459	20.0%	31,951,918	80.0%	39,952,377

Notes.

(1) Figures for 1891, and 1931 from Census of England and Wales, 1931. General Tables, Table 3, p. 3, and Table 4, p. 5.

(2) Figures for 1851, from Census of Great Britain. Numbers of the Inhabitants Vol. I, p. xlvi, Table XXIII.

(3) Definitions of Urban Population: England and Wales.

1851. London, Parliamentary Cities and Boroughs, Municipal Boroughs and towns of 2,000 inhabitants and upwards.
"This Return..., of population in towns is given upon the authority of the local Registrars of Births and Deaths, whose opinions upon the limits proper to be taken have, in most cases, been arrived at after conference with their Superintendent Registrars. The Clerks of the Peace of the respective counties have been consulted as to the places which are entitled to be deemed towns, and several places containing more than 2,000 inhabitants have been omitted, because, in the opinion of those officers, they could not in strictness be so designated". Census of Great Britain, 1851. Numbers of the Inhabitants. Vol. 1, p. xxii.

1891. "...the aggregate inhabitants of London and the urban sanitary districts..."
("...in April, 1891 there were 1,006 urban districts, (London being for convenience reckoned as one".)
Census of England and Wales, 1891. Vol. 1, p. vii.

1931 The County of London, County Boroughs, Municipal Boroughs and Urban Districts.

T A B L E 2.

Comparison of Urban and Rural Population in Scotland, 1801, 1851, 1891, 1901.

	Rural Popn.		Urban Popn.		Total Popn.
	Total		Total		
1801					1,608,420
1851	1,801,868	48.2%	1,497,079	51.8%	2,888,742
1891	1,184,498	29.4%	2,841,149	70.6%	4,025,647
1931	963,010	19.9%	3,879,970	80.1%	4,842,980

Notes.

(1) Figures for 1891 and 1931 from the Census of Scotland 1931. Vol. II, Report on the Fourteenth Decennial Census of Scotland, Table 11, p. xxi.

(2) Figures for 1851 from Census of Great Britain, Numbers of the Inhabitants. Vol I, p. xlvi, Table XXIII.

(3) The Definitions of Urban and Rural Population in Scotland.

1851. As in England and Wales.

1891. As 1931.

1931. "... those burghs with a population of 1,000 and upwards, and Special Lighting and Scavenging districts with a similar population."
Census of Scotland, 1931. Report on the Fourteenth Decennial Census of Scotland. Vol. II, p. xvi.

T A B L E 8.

Comparison of Urban and Rural Population in Great Britain.

	Rural Popn.		Urban Popn.		Total Popn.
	Total	%	Total	%	
1801					10,500,956
1851	10,328,403	49.6	10,487,838	50.4	20,816,351
1891	9,891,510	28.1	25,736,653	71.9	33,028,172
1931	8,965,400	20.0	35,831,888	80.0	44,705,357

Note: Table 8 is compiled from Tables 1 and 2.

T A B L E 4.

ENGLAND AND WALES

Population of London; the number of towns and people, and the proportions of the total population, in groups of towns with over 100,000, over 50,000, over 20,000 and over 10,000 inhabitants, respectively; the remainder of the population and the total population, in 1801, 1851, 1891 and 1931.

	1801.			1851.		
	Popn.	%	No. of towns	Popn.	%	No. of towns
London	958,863	10.8		2,362,236	13.2	
Total over 100,000	958,863	10.8	1	3,818,351	21.3	8
Total over 50,000	1,326,143	15.0	5	5,051,915	28.1	26
Total over 20,000	1,644,575	18.4	17	6,079,183	33.9	61
Total over 10,000	2,018,489	22.7	46	6,929,349	38.7	126
Remainder	6,874,047	77.2		10,998,260	61.1	
Total popn. of England and Wales.	8,892,536			17,927,609		

T A B L E 4.

Continued.

	1891.			1931.		
	Popn.	%	No. of towns	Popn.	%	No. of towns
London	4,211,956	14.5		8,203,942	20.6	
Total over 100,000	9,169,270	31.5	24	18,056,138	45.3	40
Total over 50,000	11,780,246	40.5	62	21,550,356	54.1	91
Total over 20,000	15,455,271	53.2	182	26,322,147	66.1	247
Total over 10,000	17,826,347	61.5	358	29,456,117	74.0	407
Remainder	11,174,671	38.5		10,494,170	26.3	
Total popn. of England and Wales.	29,001,018			39,952,377		

Notes: (1) For sources see tables 4b, 4c, 4d, 4e, and 4f.

(2) 1931 Greater London, 8,203,942 20.6%
County of London, 4,397,003 11.0%

T A B L E 4a.

ENGLAND AND WALES.

Population of London and the number of other towns and people and the proportions of the total population in groups of towns with over 100,000, 50,000 -100,000, 20,000 -50,000 and 10,000 -20,000 inhabitants; the remainder of the population and the total population in 1801, 1851, 1891 and 1931.

	1801.			1851.		
	No. of Towns	Popn.	%	No. of Towns	Popn.	%
London		958,863	10.8		2,362,236	13.2
Other towns over 100,000 inhabitants				7	1,456,115	8.1
Towns with 50-100,000 inhabitants	4	267,280	3.0	18	1,213,564	6.8
Towns with 20-50,000 inhabitants	12	418,430	4.7	35	1,047,273	5.9
Towns with 10-20,000 inhabitants	29	373,916	4.2	65	850,161	4.8
Remainder		6,674,047	77.2		10,998,260	61.1
Total popn. of England and Wales.		8,892,536			17,927,609	

T A B L E 4a.

Continued.

	1891.			1931.		
	No. of Towns	Popn.	%	No. of Towns	Popn.	%
London		4,211,056	14.5		8,203,942	20.6
Other towns over 100,000 inhabitants.	23	4,066,214	17.1	40	9,852,196	24.7
Towns with 50-100,000 inhabitants.	28	2,610,976	9.0	51	3,494,213	8.8
Towns with 20-50,000 inhabitants.	120	3,655,026	12.6	156	4,771,791	12.0
Towns with 10-20,000 inhabitants.	176	2,391,076	8.2	229	3,136,070	7.9
Remainder		11,174,472	38.6		10,494,170	26.3
Total popn. of England and Wales.		29,001,018			39,952,377	

Notes (1) For sources see Tables 4b, 4c, 4d, 4e, and 4f.
(2) "London" in 1931 is taken as Greater London.
Census of England and Wales, 1931;
Preliminary Report.

T A B L E 4b.

ENGLAND AND WALES

The number of towns with populations within various ranges, and the total number of people living in these groups.

No. of Inhabitants	1801 No. of Towns	1801 Total popn.	1851 No. of Towns	1851 Total popn.
Over 1,000,000	-	-	1	2,362,236
900,000-1,000,000	1	959,863	-	-
800,000-900,000	-	-	-	-
700,000-800,000	-	-	-	-
600,000-700,000	-	-	-	-
500,000-600,000	-	-	-	-
400,000-500,000	-	-	-	-
300,000-400,000	-	-	2	692,168
200,000-300,000	-	-	1	232,841
100,000-200,000	-	-	4	531,106
Total over 100,000	1	959,863	8	3,818,351
90,000-100,000	-	-	-	-
80,000-90,000	1	82,295	4	341,809
70,000-80,000	1	70,670	2	144,455
60,000-70,000	1	61,153	7	459,639
50,000-60,000	1	53,162	5	267,863
Total over 50,000	5	1,226,143	26	5,031,915
40,000-50,000	1	45,581	4	148,192
30,000-40,000	5	166,292	13	437,773
20,000-30,000	6	152,181	18	461,308
Total over 20,000	17	1,644,573	61	6,079,188
10,000-20,000	29	373,916	65	850,161
Total over 10,000	46	2,018,489	126	6,929,349
Remainder Total Popn. of England and Wales		6,674,047		10,998,260
		8,692,536		17,927,609

Note. For details and sources for 1801 and 1851 see tables 4c, and 4d.

T A B L E 4c(1)

ENGLAND AND WALES

Towns with over 20,000 inhabitants in 1801.

London	958,863
Manchester-Salford	94,876
Liverpool	82,295
Birmingham	70,670
Bristol	61,153
Leeds	53,162
Sheffield	45,581
Norwich	36,238
Portsmouth	33,220
Bath	33,196
Newcastle	33,048
Wolverhampton	30,684
Hull	29,589
Nottingham	28,801
Sunderland	24,998
Devenport	23,747
Stoke-on-Trent	23,278
Oldham	21,677

Source. Census of Great Britain, 1851.
Number of the Inhabitants, Vol I. page, cxxvi.

Note. Manchester and Salford are considered as one town (94,876) and so also are London (958,863) and Stoke-on-Trent (23,278).

T A B L E 4c(11)

ENGLAND AND WALES.

Towns with 10,000 - 20,000 Inhabitants in 1801.

Blackburn	11,980
Bolton	17,966
Bradford	13,264
Cambridge	10,087
Chatham	12,040
Chester	15,052
Coventry	16,034
Derby	10,832
Dudley	10,107
Exeter	17,412
Halifax	12,010
Ipswich	11,277
Leicester	17,005
Macclesfield	10,615
Merthyr Tydfil	10,127
Oxford	11,694
Plymouth	16,040
Preston	12,174
South Shields	11,011
Stockport	14,830
Swansea	10,117
Tynemouth	13,171
Wakefield	10,881
Walsall	10,399
Warrington	11,321
Wigan	10,989
Worcester	11,460
Yarmouth	16,846
29 towns	373,916 Inhabitants

Source. Compiled from Census of Great Britain, 1851. Numbers of the Inhabitants. Vol I. pp. cxxvi - cxxvii.

TABLE 44(1)

ENGLAND AND WALES

Towns with over 20,000 inhabitants in 1851.

London	2,362,236	Coventry	36,812
		Southampton	35,305
Liverpool	375,955	Cheltenham	35,051
Manchester	316,213	Halifax	33,582
Birmingham	232,841	Ipswich	32,914
Leeds	172,270	Wigan	31,941
Sheffield	135,310	Swansea	31,461
Wolverhampton	119,748	Bury	31,262
Bradford	103,778	Huddersfield	30,880
		Yarmouth	30,679
Newcastle upon Tyne	87,784	Ashton under Tyne	30,676
Salford	85,108	Rochdale	29,195
Kingston upon Hull	84,690	Tynemouth	29,170
Stoke-on-Trent	84,027	South Shields	28,974
Oldham	72,357	Chatham	28,424
Portsmouth	72,096	Oxford	27,843
Brighton	69,673	Cambridge	27,815
Preston	69,542	Chester	27,766
Norwich	68,195	Worcester	27,528
Sunderland	67,394	Northampton	26,657
Merthyr Tydfil	65,080	Carlisle	26,310
Bolton	61,171	Walsall	25,680
Leicester	60,584	Gateshead	25,568
Nottingham	57,407	Warrington	22,984
Bath	54,240	Dover	22,244
Stockport	53,835	Wakefield	22,065
Plymouth	52,222	Reading	21,456
Devonport	50,180	Burnley	20,828
		Maidstone	20,801
Blackburn	46,536		
Exeter	40,698		
Derby	40,609		
York	40,350		
Macclesfield	39,048		
Dudley	37,968		

Source. Compiled from Census of Great Britain 1851. Numbers of the Inhabitants. Vol. 1. Table 42 page cxxvi. Table VII, pages ccliv-ccvii.

Notes to Table 44(1)

(1) The five towns of the Potteries are considered as one town, Stoke-On-Trent (84,027) and London is also taken as one town (2,362,236) but Manchester (316,213) and Salford (85,108) are separated. Manchester-Salford (401,321.

(2) All doubtful cases, especially those in which the population of the Parliamentary Borough exceeded the present administrative district, or greatly exceeded the contemporary Municipal Borough were further investigated with the following results.

Aylesbury 26,704 (P. B. 1851) cf. 13,387 (U.D. 1931)
Details in Div. III p. 82 & 82
Aylesbury Parish 6081.
Result. Omitted.

Cheltenham 35,051 (P. B. 1851) cf. 49,418 (U.D. 1931)
Details in Div. VI p. 110 & 20
Cheltenham Parish 35,051.
Result. Included.

Cricklade 55,503 (P. B. 1851) cf. Cricklade and Wootton 11,374 (R.D. 1931)
Details in Div. V p. 94 & 16
Swindon Parish 4,876 & Cricklade Parish 1906.
Result. Omitted.

East Retford 46,054 (P. B. 1851) cf. East Retford 14,229 (M.B. 1931)
Details in Div. VII p. 94, 95, & 56
East Retford M.B. 8943
Result. Omitted

New Shoreham 30,555 (P. B. 1851) cf. Shoreham by Sea 8,757 (U.D. 1931)
Details in Div II p. 86 & 42
Worthing Parish 5,370
New Shoreham Parish 2,590.
Result. Omitted.

Stroud 36,555 (P. B. 1851) cf. Stroud 8,564 (U.D.1931)
Details in Div VI p. 110 and 24
Stroud Parish 8,798
Result. Omitted.

Wenlock 20,588 (P. B. 1851) cf. Wenlock 14,149(M.B.1931)
Details in Div. VI p. 110 & 44.
Dawley-Magna Parish 9,201; Madeley Parish 8,525; Broseley Parish 4,739
Result. Omitted.

T A B L E 4d(14)

ENGLAND AND WALES

Towns with 10,000 - 20,000 inhabitants in 1851.

Barnsley	13,437	Kings Lynn	19,655
Barnstaple	11,371	Lancaster	16,168
Bedford	11,693	Leamington	15,692
Belper	10,082	Lincoln	17,556
Berwick upon Tweed	15,094	Loughborough	10,900
Beverley	10,058	Louth	10,467
Boston	17,518	Luton	10,648
Bridgwater	10,317	Mansfield	10,012
Bury St. Edmunds	13,900	Morpeth	10,812
Canterbury	18,398	Newark	11,330
Cardiff	18,351	Newcastle under Lyne	10,569
Carmarthen	10,524	Newport	19,329
Clitheroe	11,480	Pembroke	10,107
Colchester	19,245	Pontefract	11,515
Congleton	10,520	Ramsgate	11,838
Croydon	10,260	Rochester	14,038
Darlington	11,280	St. Helens	14,866
Doncaster	12,052	Salisbury	11,657
Durham	13,188	Scarborough	13,915
Frome	10,148	Shrewsbury	19,681
Gloucester	17,572	Stafford	11,829
Grantham	10,975	Stratford	10,586
Gravesend	16,638	Taunton	14,176
Great Grimsby	12,263	Tiverton	11,144
Hastings	17,011	Trowbridge	10,157
Hereford	12,100	Truro	10,733
Heywood	12,194	Tunbridge Wells	10,587
Hyde	10,051	Warwick	10,973
Hythe	13,164	Wednesbury	11,914
Keighley	13,050	Whitby	10,980
Kendal	11,829	White Haven	18,016
Kidderminster	16,462	Winchester	15,704
		Wisbeach	10,504

Source. Compiled from Census of Great Britain, 1851. Numbers of the Inhabitants. Vol. 1 pp ccivccvii.

TABLE 4e(1)

ENGLAND AND WALES.

Towns with over 50,000 inhabitants in 1891.

Liverpool	517,951	Stockport	70,253
Manchester	505,343	Aston Manor	68,639
Birmingham	429,171	York	66,984
Leeds	367,506	Southampton	65,325
Sheffield	324,243	Northampton	61,016
Bristol	221,665	Reading	60,054
Bradford	216,361	Merthyr Tydfil	58,080
Nottingham	211,984	Ipswich	57,260
Kingston upon Hull	199,991	Bury	57,206
Salford	198,136	Wigan	55,013
Newcastle	186,345	Hanley	54,846
Portsmouth	159,255	Devonport	54,736
Leicester	142,051	Newport	54,695
Oldham	131,463	Warrington	52,742
Sunderland	130,921	Coventry	52,720
Cardiff	128,849	Hastings	52,340
Blackburn	120,064	Grimsby	51,876
Brighton	115,402	Bath	51,843
Bolton	115,002	Barrow in Furness	51,712
Preston	107,573		
Norwich	100,964		
Birkenhead	99,194		
Huddersfield	95,422		
Derby	94,146		
Swansea	90,423		
Ystradyfodwg	88,350		
Burnley	87,058		
Gateshead	85,709		
Plymouth	84,179		
Halifax	82,864		
Wolverhampton	82,620		
South Shields	78,431		
Middlesborough	75,516		
Walsall	71,791		
Rochdale	71,458		
St. Helen's	71,288		

Source. Compiled from Census of England and Wales 1891.

TABLE 4e(ii)

ENGLAND AND WALES.

Towns with over 40,000 inhabitants in 1891.

Ashton under Lyne	40,494	Oxford	45,741
Bootle	49,217	Rotherham	42,050
Burton upon Trent	46,047	Southport	43,026
Cheltenham	42,914	Stockton on Tees	49,731
Dudley	45,740	Tynemouth	43,867
Great Yarmouth	49,318	West Hartlepool	42,492
Lincoln	41,491	Worcester	42,905

Towns with over 30,000 inhabitants in 1891.

Aberdare	38,513	Handsworth	32,756
Accrington	38,603	Hyde	31,682
Balsall Heath	30,581	Jarrow	33,682
Barnsley	35,427	Keighley	30,811
Bournemouth	37,650	Lancaster	31,038
Burslem	30,862	Longton	34,327
Cambridge	36,983	Luton	30,005
[illegible]		Macclesfield	36,009
Carlisle	39,176	Maidstone	32,150
Chatham	31,711	Rowley Regis	30,791
Chester	37,105	St. George	36,718
Colchester	34,559	Scarborough	33,776
Darlington	38,060	Smethwick	36,170
Darwen	34,192	Wakefield	33,146
Dover	33,418	Wallasey	33,227
Eastbourne	34,977	West Derby	38,291
[illegible] Exeter	37,580	Widnes	30,011
Gloucester	39,444		

Source. Census of England and Wales, 1891.

T A B L E 4e(iii).

ENGLAND AND WALES.

Towns with 20,000 - 30,000 inhabitants in 1891.

Aldershot	25,595	Middleton	21,389
Bacup	23,498	Moss Side	23,833
Barton, Eccles etc.	29,600	Nelson	22,700
Batley	28,719	North Brierley	22,178
Bedford	28,023	Oldbury	20,348
Bilston	23,453	Peterborough	25,172
Blackpool	23,846	Radcliffe	20,020
Cannock	20,613	Ramsgate	24,676
Canterbury	23,026	Rawtenstall	29,507
Chadderton	22,087	Reigate	22,646
Chorley	23,082	Rochester	26,309
Goseley	21,899	Royal Leamington Spa	26,930
Crewe	28,761	Runcorn	20,050
Dewsbury	29,847	Shrewsbury	26,967
Doncaster	25,936	Stafford	21,751
Farnworth	23,758	Stalybridge	26,783
Folkestone	23,700	Stoke upon Trent	24,027
Gillingham	27,813	Stretford	21,751
Glossop	22,414	Swindon	32,840
Gosport	25,457	Swinton and Pendlebury	20,197
Gravesend	24,007	Tipton	29,314
Hartlepool	21,521	Todmorden	24,725
Hereford	20,267	Torquay	25,534
Heywood	23,286	Toxteth	21,046
Hove	26,097	Tunbridge Wells	27,895
Kidderminster	24,803	Wednesbury	25,3422
Kingston on Thames	27,059	Workington	23,522
Leigh	28,702		
Llanelly	23,937		
Lowestoft	23,347		

TABLE 4e(iv).

ENGLAND AND WALES.

Towns with 10,000 - 20,000 inhabitants in 1891.

Abersychan	15,296	Congleton	10,774
Alfreton	15,355	Cowpen	12,982
Altrincham	12,424	Crompton	12,901
Ashford	10,728	Dalton in Furness	13,300
Ashton in Makerfield	13,379	Darlaston	14,422
Atherton	15,833	Denton and Haughton	13,993
Audley	12,631	Dukinfield	14,408
Banbury	12,767	Durham	14,863
Barnstaple	13,058	East Retford	10,603
Barry	13,268	East Stonehouse	15,502
Bedlingtonshire	16,996	Ebbw Vale	17,025
Belgrave	11,453	Eston	10,695
Belper	10,420	Failsworth	10,425
Benwell	10,518	Faversham	10,478
Berwick	13,378	Felling	17,473
Beverley	12,539	Fenton	16,998
Bingley	10,023	Ffestiniog	10,073
Birkdale	12,387	Gainsborough	14,372
Bishop Auckland	10,527	Garston	13,444
Blaenavon	11,454	Goole	15,413
Blaydon	13,371	Gorton	15,215
Boston	14,593	Grantham	16,746
Brandon and Byshottles	14,239	Grays Thurrock	12,217
Bridgewater	12,429	Guildford	14,319
Brierley Hill	11,831	Handsworth	10,295
Brighouse	10,276	Harrogate	13,917
Brownhills	13,703	Haslingden	18,225
Bury St. Edmunds	16,630	Hebburn	16,638
Camborne	14,700	Hindley	18,973
Carmarthen	10,338	Horwich	12,850
Castleford	14,143	Hoyland Nether	11,006
Chalmsford	11,008	Hucknall	13,094
Chepping Wycombe	13,435	Ilkeston	19,744
Chesterfield	13,242	Ince in Makerfield	19,255
Cleckheaton	11,826	Kendal	14,430
Clitheroe	10,815	Kettering	19,454
Colne and Marsden	16,774	Kings Lynn	18,265
		Leek	14,128
		Lewes	10,937

T A B L E 4e(iv) cont.

Littleborough	10,878
Liversedge	13,608
Loughborough	18,196
Mansfield	15,925
Margate	18,419
Mirfield	11,707
Morley	18,725
Mossley	14,162
Mountain Ash	17,495
Nantyglo and Blaina	12,360
Neath	11,157
Newark	14,457
Newbury	11,002
Newcastle under Lyme	18,452
Newport	10,216
Newton in Makerfield	12,861
Normanton	10,234
Northfleet	11,717
Northwich	14,914
Nuneaton	11,580
Ogmore and Garw	13,800
Ossett	10,984
Oswaldtwistle	13,396
Padiham	11,311
Pemberton	14,978
Penarth	12,422
Penzance	12,448
Pontypridd	19,971
Poole	15,405
Pudsey	13,444
Ramsbottom	16,727
Rawmarsh	11,983
Redditch	11,295
Redruth	10,324
Royton	13,395
Rugby	11,262
Ryde	10,952
St. Albans	12,895
Salisbury	15,980
Sedgeley	14,961
Sheerness	13,841
Shipley	16,043
Shirley and Freemantle	15,8[illegible]
Skelton and Brotton	11,842
Skipton	10,376
Southend	12,333
South Stockton	15,476
Southwick	10,266
Sowerby Bridge	10,408
Stapleton	14,589
Sutton in Ashfield	10,536
Taunton	18,026
Tiverton	10,893
Tonbridge	10,123
Tredegar	17,484
Trowbridge	11,717
Truro	11,131
Tunstall	15,730
Tyldesley with Shakersley	12,891
Walker	11,341
Wallsend	11,620
Walton le Dale	10,556
Warwick	11,905
Waterloo with Seaforth	17,328
Watford	16,819
Wavertree	13,764
Wellinborough	15,068
Wenlock	15,703
West Houghton	11,077
Weston super Mare	15,873
Weymouth	13,769
Whitby	13,274
Whitefield	10,781
Whitehaven	18,044
Willenhall	16,852
Winchester	19,073
Windsor	12,327
Winsford	10,440
[illegible]	
Wombwell	10,942
Worksop	12,552

TABLE 4f(1)

ENGLAND AND WALES.

Towns with over 60,000 inhabitants in 1931.

Birmingham C.B.	1,002,413	Grimsby C.B.	92,492,463
Liverpool C.B.	855,539	Northampton	92,314
Manchester C.B.	766,333	Rochdale C.B.	90,278
Sheffield C.B.	511,742	Newport (Mon.) C.B.	89,198
Leeds C.B.	482,769	Ipswich C.B.	87,557
Bristol C.B.	396,018	Wigan C.B.	85,357
Kingston upon Hull C.B.	313,360	York C.B.	84,810
Bradford C.B.	298,041	Smethwick C.B.	84,354
~~West Ham C.B.~~	~~294,000~~	West Bromwich C.B.	81,281
Newcastle upon Tyne C.B.	283,145	Oxford C.B.	80,540
Stoke on Trent C.B.	276,619	Warrington C.B.	79,328
Nottingham C.B.	268,601	Southport C.B.	78,927
Portsmouth	249,288	Bootle C.B.	76,799
Leicester C.B.	239,111	Darlington C.B.	72,093
Cardiff C.B.	223,648	Barnsley C.B.	71,522
Salford C.B.	223,442	Merthyr Tydfil C.B.	71,099
Plymouth C.B.	208,166	Rotherham C.B.	69,689
Sunderland C.B.	185,870	Bath C.B.	68,801
Bolton C.B.	177,853	Luton M.B.	68,526
Southampton C.B.	176,025	West Hartlepool C.B.	68,134
Coventry C.B.	167,046	~~Enfield U.D.~~	~~67,869~~
Swansea C.B.	164,625	Stockton on Tees M.B.	67,724
Birkenhead C.B.	147,946	Cambridge M.B.	66,803
Brighton C.B.	147,427	Barrow in Furness C.B.	66,366
Derby C.B.	142,406	Lincoln C.B.	66,246
Rhondda U.D.	141,344	Exeter C.B.	66,039
Oldham C.B.	140,309	Hastings C.B.	65,190
Middlesbrough C.B.	138,489	Tynemouth C.B.	64,913
Wolverhampton C.B.	133,190	Chesterfield M.B.	64,146
Norwich C.B.	126,207	Doncaster C.B.	63,308
Stockport C.B.	125,595	Swindon M.B.	62,407
Blackburn C.B.	122,095	Gillingham M.B.	60,983
Gateshead C.B.	122,379	Dudley C.B.	59,579
Southend on Sea C.B.	120,093	Wakefield C.B.	59,115
Preston C.B.	118,839	Eastbourne C.B.	57,435
Bournemouth C.B.	116,780	Poole M.B.	57,258
Huddersfield C.B.	113,467	Carlisle C.B.	57,107
South Shields C.B.	113,452	Watford M.B.	56,799
St. Helens C.B.	106,793	Stretford U.D.	56,795
Blackpool C.B.	101,543	Great Yarmouth C.B.	56,769
Burnley C.B.	98,259	Bury C.B.	56,186
Halifax C.B.	98,122		
Wallasey C.B.	97,465		
Reading C.B.	97,158		

T A B L E 4f(1)

Continued.

Bury C.B.	56,186
Hove M.B.	54,994
Dewsbury C.B.	54,305
Gloucester C.B.	52,937
Ashton under Lyne M.B.	51,573
Worcester C.B.	50,497

Source. Compiled from Census of England and Wales, 1931 Preliminary Report. Table 4 pages 66-67.

Note. Walsall C.B. omitted from above. Figures as follows. Population 103,102

Note. Urban Districts within Greater London are listed separately in Table 6a.

T A B L E 42(11)

ENGLAND AND WALES.

Towns with 40,000-50,000 inhabitants in 1931.

Aberdare	48,745
Accrington	42,991
Bedford	40,544
Burton on Trent	49,436
Chatham	42,999
Cheltenham	49,418
Chester	41,440
Colchester	48,701
Crewe	46,069
Dover	41,097
Eccles	44,416
Gelligaer	41,045
Keighley	40,441
Lancaster	45,885
Leigh	45,817
Lowestoft	41,769
Maidstone	48,280
Mansfield	46,077
Nuneaton	46,291
Peterborough	45,551
Pontypridd	48,717
Port Talbot	40,678
Rowley Regis	41,235
Scarborough	41,788
Torquay	46,165
Wallsend	44,587
Widnes	40,619
Worthing	46,284

Source. Compiled from Census of England and Wales 1931 General Tables. Table 8B. pp. 18-36.

Note. Urban Districts within Greater London are listed separately in Table 6a.

T A B L E 4f(iii)

ENGLAND AND WALES.

ENGLAND AND WALES.

Towns with 30,000-40,000 inhabitants in 1931.

Abertillery	31,803
Aldershot	34,280
Barry	38,891
Batley	34,573
Bedwellty	30,074
Bilston	31,255
Blaydon	32,264
Blyth	31,680
Caerphilly	35,768
Cannock	34,585
Chorley	30,796
Ebbw Vale	31,686
Eston	31,345
Folkestone	35,889
Gosport	38,338
Gravesend	35,495
Guildford	30,754
Halesowen	31,059
Harrogate	39,770
Hyde	32,075
Ilkeston	32,813
Jarrow	32,018
Kettering	31,220
Llanelly	38,416
Macclesfield	34,905
Margate	31,341
Mountain Ash	38,386
Neath	32,340
Nelson	30,304
Oldbury(Worc.)	35,926
Ramsgate	33,603
Reigate	30,825
Rochester	31,195
Romford	35,918
Royal Tunbridge Wells	36,365
Scunthorpe and Frodingham	33,761
Shipley	30,242
Shrewsbury	33,372
Slough	32,530
Pemborough	30,963
Swinton and Pendlebury	32,761
Tipton	35,814
Waterloo with Seaforth	31,167

T A B L E 4f(111)

Continued.

Wednesbury	31,551
Wolstanton United	30,525

Source. Compiled from Census of England and Wales 1931 General Tables. Table 6B. pp. 18-36.

Note. Urban Districts within Greater London are listed separately in Table 6a.

T A B L E 4f(iv)

ENGLAND AND WALES.

Towns with 25,000-30,000 Inhabitants in 1931.

Aberaychan	25,748
Ashington	29,418
Bebington and Bromborough	26,740
Bedlington	27,461
Chadderton	27,450
Chelmsford	26,537
Chopping Wycombe	27,988
Cleethorpes	28,621
Cosely	25,187
Dartford	28,871
Farnworth	28,717
Felling	27,040
Heywood	25,968
Hornchurch	28,417
Kidderminster	28,917
Llwchwr	26,626
Loughborough	26,945
Lytham St. Annes	25,764
Maesteg	25,570
Middleton	29,188
Ogmore and Garw	26,981
Rawtenstall	28,587
Royal Leamington Spa	29,669
St Albans City	28,624
Sale	28,071
Salisbury	26,660
Stafford	29,486
Sutton Coldfield	29,928
Sutton in Ashfield	25,155
Taunton	25,173
Weston super mare	28,554
Woking	29,951
Worksop	26,285

Source. Compiled from Census of England and Wales 1931 General Tables. Table 9D. pp. 18-36.

Note. Urban Districts within Greater London are listed separately in Table 6a.

T A B L E 4f(v)

ENGLAND AND WALES.

Towns with 20,000-25,000 inhabitants in 1931.

Abercarn	20,551
Adwick le Street	20,257
Alfreton	21,234
Altrincham	21,356
Ashton in Maker-field	20,546
Bacup	20,500
Bexhill	21,229
Bingley	20,565
Canterbury	24,446
Carlton	22,325
Castleford	21,784
Coalville	21,680
Colwyn Bay	20,886
Fleetwood	25,001
Goole	20,259
Hartlepool	20,587
Heanor	22,381
Hebburn	24,163
Hereford	24,163
Hindley (Lancs.)	21,632
Ince in Maker-field	21,761
Kings Lynn	20,583
Long Eaton	22,345
Morecambe and Heysham	24,542
Morley	23,396
Newcastle under Lyme	25,246
Newton in Maker-field	20,153
New Windsor	20,287
Prestwich	25,681
Radcliffe	24,675
Redcar	20,160
Rugby	23,826
Sittingborne and Milton	20,177
Stalybridge	24,831
Stanley	24,460
Swadlincote dist.	20,308
Thornaby on Tees	21,233
Todmorden	22,222
Trodegar	23,102

T A B L E 4f(v)

Continued.

Wellingborough	21,223
Weymouth and Melcombe Regis	22,189
Whickham	20,756
Whitehaven	21,159
Whitley and Monkseaton	24,210
Willenhall	21,150
Winchester	22,970
Workington	24,751

Source. Compiled from Census of England and Wales 1931 General Tables. Table 8B, pp. 18-36.

Note. Urban Districts within Greater London are listed separately in Table 6a.

T A B L E 5.

SCOTLAND.

Population of Glasgow; the number of towns and people, and the proportions of the total population, in groups of towns with over 100,000, over 50,000, over 20,000 and over 10,000 inhabitants, respectively; the remainder of the population and the total population, in 1801, 1851, 1891 and 1931.

	1801.			1851.		
	Popn.	%	No. of Towns	Popn.	%	No. of Towns
Glasgow	77,058	4.8		329,097	11.4	
Total over 100,000				489,399	17.0	2
Total over 50,000	158,462	9.9	2	640,303	22.3	4
Total over 20,000	237,969	14.8	5	801,141	28.0	9
Total over 10,000	271,486	16.9	7	929,531	32.5	18
Remainder	1,336,934	83.0		1,954,842	68.0	
Total popn. of Scotland	1,608,420			2,883,373		

T A B L E 5.

Continued.

	1891.			1931.		
	Popn.	%	No. of Towns	Popn.	%	No. of Towns
Glasgow	658,193	16.4		1,088,461	22.6	
Total over 100,000	1,202,427	29.9	4	1,870,314	38.8	4
Total over 50,000	1,405,596	35.0	8	2,100,418	43.5	7
Total over 20,000	1,648,455	41.0	17	2,594,104	53.8	22
Total over 10,000	1,952,541	48.5	37	2,851,075	59.2	41
Remainder	2,073,106	51.5		1,991,905	41.2	
Total popn. of Scotland	4,025,647			4,842,980		

Notes: (1) For Sources see Tables 4b, 4c, 4d, 4e, and 4f.

(2) The decrease in the number of towns over 50,000, 1801-1931, is due to the incorporation of Leith in Edinburgh, and Govan in Glasgow, off-set by the increase of population in Clydebank.

T A B L E 5a.

SCOTLAND

Population of Glasgow and the number of other towns and people and the proportions of the total population in groups of towns with over 100,000, 50,000-100,000, 20,000-50,000 and 10,000-20,000 inhabitants; the remainder of the population and the total population in 1801, 1851, 1891, and 1931.

	1801.			1851.		
	No. of Towns	Popn.	%	No. of Towns	Popn.	%
Glasgow					329,097	11.4
Other towns over 100,000 inhabitants				11	160,302	5.6
Towns with 50-100,000 inhabitants	4	153,462	9.9	2	150,904	5.2
Towns with 20-50,000 inhabitants	3	79,446	4.9	5	160,838	5.6
Towns with 10-20,000 inhabitants	2	33,578	2.1	9	127,390	4.4
Remainder		1,356,954	83.0		1,954,842	68.0
Total popn. of Scotland		1,608,420			2,883,373	

T A B L E 5a.

Continued.

	1891.			1931		
	No. of Towns	Popn.	%	No. of Towns	Popn.	%
Glasgow		658,198	16.4		1,088,461	22.6
Other towns over 100,000 inhabitants.	3	554,229	13.8	3	781,853	16.2
Towns with 50-100,000 inhabitants.	4	203,169	5.0	3	230,104	4.8
Towns with 20-50,000 inhabitants.	9	242,859	6.0	15	493,686	10.2
Towns with 10-20,000 inhabitants.	20	304,086	7.6	19	256,971	5.3
Remainder		2,073,106	51.5		1,991,905	41.2
Total popn. of Scotland.		4,025,647			4,842,980	

Note: (1) For Sources see Tables 4b, 4c, 4d, 4e, and 4f.

T A B L E 56.

SCOTLAND.

Towns with over 10,000 inhabitants in 1801.

Edinburgh and Leith	81,404
Glasgow	77,058
Dundee	27,396
Aberdeen	26,992
Paisley	25,058
Greenock	17,190
Perth	16,598

Source. Census of Great Britain, 1851.
Number of the Inhabitants, Vol 1., page, cxxvii.

Note. Edinburgh and Leith are considered as one town.

T A B L E 5d.

SCOTLAND.

Towns with over 10,000 inhabitants in 1851.

Glasgow	329,097
Edinburgh	160,302
Dundee	78,931
Aberdeen	71,975
Paisley	47,952
Greenock	36,689
Leith	30,919
Perth	23,835
Kilmarnock	21,443
Ayr	17,624
Arbroath	16,996
Montrose	15,258
Airdrie	14,455
Dunfermline	13,856
Dumfries	13,166
Stirling	12,957
Inverness	12,793
Kirkaldy	10,475

Source. Census of Great Britain, 1851. Number of the Inhabitants Vol. 1. Table XIV page, xxviii-xxxix.

Note. Edinburgh (160,302) and Leith (30,919) are separated.
Edinburgh-Leith, 191,221.

T A B L E 5c.

SCOTLAND.

Towns with over 10,000 inhabitants in 1891.

Glasgow	658,198
Edinburgh	263,646
Dundee	155,640
Aberdeen	124,943
Leith	69,696
Paisley	66,425
Govan	63,625
Greenock	68,423
Partick	36,532
Perth	29,919
Coatbridge	29,917
Kilmarnock	28,447
Kirkcaldy	27,151
Ayr	25,213
Hamilton	24,859
Arbroath	22,960
Inverness	20,855
Falkirk	19,769
Dunfermline	19,647
Hawick	19,304
Airdrie	19,135
Motherwell	18,726
Dumfries	17,821
Dumbarton	17,626
Galashiels	17,367
Stirling	16,781
Wishaw	15,252
Port Glasgow	14,685
Kilming Park	13,879
Rutherglen	13,085
Montrose	15,079
Alloa	12,643
Peterhead	12,226
Forfar	12,057
Clydebank	10,589
Polloksbaws	10,405
Kirkintilloch	10,312

Source. Census of Scotland, 1891.
Abstracted from Table pages 134 - 252.

Note. Edinburgh (263,646) and Leith (69,969) are separated. Edinburgh-Leith. (333,615)

T A B L E 5f.

SCOTLAND.

Towns with over 10,000 inhabitants in 1931.

Glasgow R.B.	1,088,417
Edinburgh R.B.	438,999
Dundee R.B.	175,583
AberdeenR.B.	167,259
Paisley B.	80,441
Greenock B.	78,948
Motherwell and Wishaw	64,703
Clydebank	46,963
Kirkcaldy R.B.	43,874
Coatbridge	43,056
Kilmarnock B.	38,099
Hamilton B.	37,863
Ayr R.B.	36,784
Falkirk B.	36,565
Dunfermline R.B.	34,954
Perth R.B.	34,807
Airdrie B.	25,954
Rutherglen R.B.	25,167
Dumfries R.B.	22,795
Stirling R.B.	22,593
Inverness R.B.	22,582
Dumbarton R.B	21,546
Port-Glasgow B.	19,580
Buckhaven and Methil	17,648
Arbroath R.B.	17,037
Hawick B.	17,059
Musselburgh B.	16,996
Renfrew R.B.	14,986
Alloa	13,522
Galashiels B.	13,102
Johnstone	12,837
Cowdenbeath	12,731
Peterhead B.	12,545
Barrhead	12,308
Irvine R.B.	12,032
Kirkintilloch	11,817
Grangemouth	11,798
Montrose R.B.	10,196
Saltcoats	10,173
Bathgate	10,097
Bowrowstounness	10,095

Source. Census of Scotland, 1931. Preliminary Report. Abstracted from Table pages 41.

T A B L E C.

GREATER LONDON.

The Administrative County of London, and the number of Boroughs and Urban Districts outside it, with populations within various ranges and the total number living in these groups in 1931.

No. of Inhabitants	No. of Units	Total Population
Over 1,000,000	1	4,396,821
900,000-1,000,000	-	-
800,000-900,000	-	-
700,000-800,000	-	-
600,000-700,000	-	-
500,000-600,000	-	-
400,000-500,000	-	-
300,000-400,000	-	-
200,000-300,000	2	527,201
100,000-200,000	8	1,110,816
Total over 100,000	11	6,034,338
90,000-100,000	1	95,524
80,000-90,000	1	80,365
70,000-80,000	3	223,621
60,000-70,000	2	130,486
50,000-60,000	6	336,374
Total over 50,000	24	6,900,708
40,000-50,000	6	267,883
30,000-40,000	8	290,936
20,000-30,000	13	326,262
Total over 20,000	51	7,794,789
10,000-20,000	13	191,430
Total over 10,000	64	7,986,219
Remainder		217,723
Total population of Greater London.		8,203,942

Source. Census of England and Wales, 1931; Preliminary Report, Table VI, page 63-65.

TABLE 6a(1).

GREATER LONDON.

Administrative units with over 50,000 inhabitants in 1931.

Administrative County of London	4,396,021
West Ham, C.B.	294,686
Croydon, C.B.	233,115
Ealing, M.B.	117,688
Hendon	115,682
Tottenham	157,748
Willesden	184,410
East Ham, C.B.	142,460
Ilford, M.B.	131,046
Leyton, M.B.	128,517
Walthamstow, M.B.	132,965
Hornsey, M.B.	95,524
Dagenham	69,365
Acton, M.B.	70,523
Edmonton	77,652
Heston and Isleworth	75,446
Brentford and Chiswick	62,617
Enfield	67,969
Mitcham	56,856
Wimbledon, M.B.	59,580
Finchley	58,061
Southgate	55,570
Wood Green	54,190
Barking Town	51,277

Source. Census of England and Wales, 1931; Preliminary Report, Table VI, page 63-65.

TABLE 6a(11)

GREATER LONDON

Urban Districts with over 20,000 inhabitants in 1951.

Wembley	42,489
Sutton and Cheam	40,488
Bromley, M.B.	45,848
Beckenham	43,884
Morton and Morden	41,228
Barnes	42,439
Twickenham, M.B.	39,909
Kingston on Thames, M.B.	39,052
Southall Norwood	38,932
Richmond, M.B.	37,791
Coulsdon and Purley	37,666
Bexley	32,940
Erith	32,780
Uxbridge	31,866
Surbiton	29,396
Carshalton	28,709
Penge	27,762
Woaldstone	27,001
Harrow on the Hill	26,378
Beddington and Wallington	26,249
Woodford	25,946
Hayes and Harlington	25,646
The Maldens and Coombe	23,412
Teddington	23,362
Friern Barnet	23,081
Chingford	22,051
Staines	21,209
Wanstead	19,183
E. Barnet Valley	18,542
Kingsbury	16,636
Ruislip Northwood	16,038
Crayford	15,867
Barnet	14,721
Cheshunt	14,651
Esher and The Dittons	13,736
Sunbury on Thames	13,329
Yiewsley and West Drayton	13,057
Hampton	13,053
Sidcup	12,360

Source. Census of England and Wales, 1951;
Preliminary Report, Table VI, page 62-65.

TABLE 7.

GREAT BRITAIN

Population of London; the number of towns and people, and the proportions of the total population, in groups of towns with over 100,000, over 50,000, over 20,000 and over 10,000 inhabitants, respectively; the remainder of the population and the total population, in 1801, 1851, 1891 and 1931.

	1801.			1851.		
	Popn.	%	No. of towns	Popn.	%	No. of towns
London	958,863	9.1	1	2,362,236	11.4	
Total over 100,000	1,958,863	9.1	1	4,307,750	20.8	10
Total over 50,000	1,384,605	13.2	7	5,672,218	27.3	30
Total over 20,000	1,882,481	18.0	22	6,880,329	33.9	70
Total over 10,000	2,289,975	21.0	53	7,857,080	37.8	144
Remainder	8,210,981	78.2		12,953,102	62.2	
Total popn. of Great Britain.	10,500,956			20,810,982		

TABLE 7.

Continued.

	1801. Popn.	%	No. of towns	1921. Popn.	%	No. of towns
London	4,211,050	12.8		4,397,003	9.8	
Total over 100,000	10,371,007	31.2	28	17,786,938	39.5	55
Total over 50,000	13,185,842	39.5	170	22,356,630	49.6	122
Total over 20,000	17,083,726	51.7	199	28,607,188	63.5	320
Total over 10,000	19,778,888	59.6	395	32,091,559	71.6	572
Remainder	13,247,777	40.1		12,703,798	28.3	
Total Popn. of Great Britain	33,026,665			44,795,357		

Note: For sources see Tables 4 and 5.

TABLE 7a.

GREAT BRITAIN

Population of London and the number of other towns and people and the proportions of the total population in groups of towns with over 100,000, 50,000 - 100,000, 20,000 - 50,000 and 10,000 - 20,000 inhabitants; the remainder of the population and the total population in 1801, 1851, 1891 and 1931.

	1801.			1851.		
	No. of Towns	Popn.	%	No. of Towr	Popn.	%
London		958,863	9.1		2,362,236	11.4
Other towns over 100,000 inhabitants				9	1,945,719	9.4
Towns with 50-100,000 inhabitants	6	425,724	4.0	20	1,364,468	6.6
Towns with 20-50,000 inhabitants	15	497,876	4.7	40	1,208,111	5.3
Towns with 10-20,000 inhabitants	31	407,494	3.9	74	977,551	4.7
Remainder		8,211,001	78.2		12,953,102	62.3
Total popn. of Great Britain.		10,500,956			20,810,982	

T A B L E 7a.

Continued.

	1891.			1931.		
	No. of Towns	Popn.	%	No. of Towns	Popn.	%
London		4,211,056	12.8		8,203,942	18.3
Other towns over 100,000 inhabitants.	27	6,160,641	18.6	44	11,723,519	26.2
Towns with 50-100,000 inhabitants.	42	2,814,146	8.5	53	3,724,522	8.3
Towns with 20-50,000 inhabitants.	120	3,697,884	11.8	171	5,265,477	11.8
Towns with 10-20,000 inhabitants.	196	2,695,162	8.2	239	3,392,941	7.6
Remainder		13,247,577	40.2		12,496,975	27.9
Total popn. of Great Britain.		33,026,665			44,705,357	

Note: For sources see Tables 4 and 5.

T A B L E 8.

GREAT BRITAIN.

Total Population	44,795,357
Male	21,469,533
Female	23,356,824
Number of females per 1,000 males	1,090
Employed Males	12,834,036
Employed Females	5,716,013
Total Employed	18,550,049
Unemployed Males	1,967,325
Unemployed Females	557,379
Total Unemployed	2,524,702
Total Males, Employed and "Out of Work"	14,801,359
Total Females, " " "Out of Work"	6,273,392
Total Associated with Industry	21,074,751
Proportion Associated with Industry	47.3%
Proportion of population employed 1931	41.5%
Proportion of male population associated with Industry	69%
Proportion of male population employed	60%
Proportion of female population associated with Industry	26.8%
Proportion of female population employed	24.5%

Total population is

2.1 times the number associated with Industry.
2.4 times the number employed
3.0 times the number of men associated with Industry.
3.5 times the number of men associated with production.

T A B L E 11(1)

Proportions per 1,000 of total employed in each group, and in Production and Services respectively, in Britain, England and Wales, Greater London, and towns with over 50,000 inhabitants in 1931.

	(1)	(2)	(3)	(4)	(5)	P	S	Total
Britain	123	164	194	194	368	441	556	997
England and Wales	119	164	156	198	360	439	568	997
Greater London	10	90	178	274	449	278	723	1,001
Britain Exc. Greater London	161	188	138	184	325	471	519	990
England and Wales exc. Greater London	151	185	143	188	326	479	524	1,003
Towns								
Ashton under Lyne	83	415	135	114	395	583	417	1,000
Barnsley	540	81	139	125	311	560	436	996
Barrow	13	495	73	125	296	581	419	1,000
Bath	25	76	168	326	404	269	730	999
Birkenhead	11	92	146	210	538	249	748	997
Birmingham	5	401	174	140	301	580	441	1,021
Blackburn	15	490	131	111	318	576	429	1,005
Blackpool	19	42	132	358	446	192	804	996
Bolton	31	517	80	110	248	620	358	986
Bootle	3	115	178	102	594	296	696	992
Bournemouth	19	35	95	422	433	139	855	994
Bradford	12	443	83	151	332	538	483	1,021
Brighton	15	65	103	330	461	203	791	994
Bristol	9	82	303	184	420	393	604	997
Burnley	69	490	396	92	261	655	343	998
Bury	10	421	192	112	274	623	386	1,009
Cambridge	20	57	152	280	488	229	768	997
Cardiff	21	85	146	197	554	352	741	993
Carlisle	13	178	210	169	422	400	591	991
Chesterfield	223	219	123	130	304	563	433	996
Coventry	13	599	53	121	215	665	336	1,001
Darlington	10	305	98	195	381	422	574	996
Derby	11	381	111	130	362	503	498	1,001
Dewsbury	99	390	236	136	287	575	422	997
Doncaster	92	246	779	172	409	417	581	998
Dudley	47	383	183	127	262	613	389	1,001

T A B L E 12(1)

Continued.

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Eastbourne	20	32	76	438	439	125	871	996
Exeter	19	68	186	252	607	243	750	1,002
Gateshead	77	172	186	160	625	435	583	1,018
Gillingham	85	214	51	122	980	819	1,012	
Gloucester	14	100	224	196	462	533	657	995
Grimsby	196	84	163	168	416	412	584	996
Halifax	30	453	146	117	261	619	378	997
Hastings	24	28	81	879	490	130	869	999
Hove	13	65	94	409	440	152	849	1,001
Huddersfield	17	447	148	127	274	610	401	1,011
Hull	54	99	197	165	465	350	646	996
Ipswich	15	156	215	202	408	386	610	996
Leeds	23	105	357	142	331	545	465	1,008
Leicester	8	321	281	125	264	610	389	999
Lincoln	14	509	108	167	409	416	576	992
Liverpool	7	84	210	165	528	301	693	994
Luton	7	224	417	122	231	648	353	1,001
Manchester	10	200	283	154	396	483	550	993
Merthyr Tydfil	461	48	47	115	332	556	445	1,001
Middlesborough	19	305	113	151	412	437	563	1,000
Newcastle	30	174	152	189	459	356	648	1,004
Newport	16	198	96	186	511	310	697	1,007
Northampton	11	49	485	142	311	545	453	998
Norwich	15	62	381	156	360	478	516	994
Nottingham	58	270	191	143	320	519	465	982
Oldham	14	612	66	96	225	692	321	1,013
Oxford	12	173	119	270	420	304	690	994
Plymouth	11	149	101	174	553	261	727	988
Poole	96	87	163	369	400	228	769	994
Portsmouth	3	149	105	195	555	248	749	997
Preston	9	377	139	134	367	524	471	995
Reading	27	79	266	199	403	372	602	974
Rhondda	657	7	26	71	237	689	308	997
Rochdale	9	607	94	106	221	670	329	999
Rotherham	161	536	66	156	301	556	437	993
St. Helens	235	54	350	106	252	639	359	997
Salford	13	247	230	119	308	499	486	985
Sheffield	55	330	109	131	324	542	455	997
Smethwick	4	479	148	113	255	650	368	998
Southampton	12	140	95	253	516	247	749	996
Southend on Sea	13	54	117	285	531	184	816	1,000
Southport	23	67	121	327	459	211	786	997
South Shields	155	110	66	178	497	329	665	994
Stockport	10	309	209	138	380	527	468	995
Stockton on Tees	20	226	190	166	360	446	548	994
Stoke on Trent	140	47	489	89	224	695	313	998

T A B L E 11(1).

Continued.

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Stretford	13	276	169	185	598	478	525	1,001
Sunderland	112	154	115	203	459	361	625	984
Swansea	68	184	69	174	478	341	652	993
Swindon	6	478	91	127	697	577	414	991
Tynemouth	58	142	91	207	463	316	670	986
Wakefield	130	255	98	128	584	483	513	995
Wallasey	16	48	143	216	573	204	793	997
Walsall	69	280	287	185	281	584	416	1,000
Warrington	6	373	242	112	267	621	579	1,000
Watford	10	73	226	284	458	319	688	1,007
West Bromwich	30	471	158	110	227	659	337	996
West Hartlepool	49	179	118	196	488	348	678	1,024
Wigan	252	231	134	107	305	587	412	999
Wolverhampton	10	405	169	154	353	524	477	1,001
Worcester	14	168	227	195	409	409	394	1,003
Yarmouth	38	90	198	226	456	310	684	99994
York	11	79	271	184	456	361	639	1,000

Source. Census of England and Wales 1931. Industry Tables. Table 11, pages 12-161.

T A B L E 11(11)

ENGLAND AND WALES.

Proportions per 1,000 of total employed in each Group, and in Production and Services respectively, in towns with 40,000-50,000 inhabitants in 1931.

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Aberdare	593	13	35	86	270	646	356	1,002
Accrington	46	540	98	78	245	684	323	1,007
Bedford	16	172	147	246	413	335	659	994
Burton on Trent	25	89	390	153	316	504	469	973
Chatham	22	249	88	184	452	359	636	995
Cheltenham	32	49	131	365	418	212	783	995
Chester	25	138	121	244	472	284	716	1,000
Colchester	30	75	168	179	552	303	731	9994
Crewe	7	306	140	112	441	453	553	1,006
Dover	75	32	98	217	572	205	789	994
Eccles	34	298	137	141	393	469	534	1,003
Gelligaer	692	9	21	74	197	732	271	993
Keighley	12	581	81	103	233	674	336	1,010
Lancaster	11	191	280	148	364	482	512	994
Leigh	274	420	41	72	191	735	265	998
Lowestoft	129	109	102	213	445	340	658	998
Maidstone	43	67	259	221	415	369	636	1,005
Mansfield	328	176	87	132	300	590	432	992
Nuneaton	252	250	163	105	225	665	330	995
Peterborough	28	152	145	181	493	325	674	999
Pontypridd	267	44	61	131	393	472	524	996
Port Talbot	124	378	35	100	364	537	464	1,002
Rowley Regis	49	553	129	100	164	751	264	995
Scarborough	31	39	106	381	443	176	824	1,000
Torquay	21	26	76	457	420	123	877	1,000
Wallsend	139	389	52	150	272	580	422	1,002
Widnes	85	120	374	128	296	579	424	1,003
Worthing	73	31	65	404	425	169	829	998

Source. Compiled from Census of England and Wales. Industry Tables. Table 3. pp. 182-309.

TABLE 21(111)

ENGLAND AND WALES.

Proportions per 1,000 of total employed in each group, and in Production and Services respectively, in towns with 30,000-40,000 inhabitants in 1931.

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Abertillery	646	44	24	71	219	714	290	1,004
Aldershot	4	19	56	108	801	79	909	988
Barry	34	91	72	159	635	197	794	991
Batley	59	504	89	95	256	652	351	1,003
Bedwellty	701	5	23	67	205	728	273	1,001
Bilston	23	594	79	101	206	696	307	1,003
Blaydon	549	78	57	96	329	684	325	1,090
Blyth	336	90	45	129	421	461	550	1,011
Caerphilly	495	61	37	119	290	593	409	1,002
Cannock	607	30	76	112	169	713	281	994
Chorley	53	513	105	113	216	670	329	999
Ebbw Vale	603	66	33	73	227	702	300	1,002
Eston	49	540	58	103	247	647	350	997
Folkestone	25	31	67	398	482	123	880	1,003
Gosport	19	73	52	211	644	144	855	999
Gravesend	44	92	186	200	477	322	677	999
Guildford	17	90	131	292	470	238	762	1,000
Halesowen	34	525	122	124	196	681	320	1,001
Harrogate	22	40	97	405	437	159	842	1,001
Hyde	16	398	260	106	220	674	326	1,000
Ilkeston	280	396	74	80	171	750	251	1,001
Jarrow	34	329	70	167	400	433	567	1,000
Kettering	16	55	563	112	250	634	362	996
Llanelly	17	454	63	115	348	534	463	999
Macclesfield	25	392	178	131	262	595	393	988
Margate	20	20	75	414	473	115	887	1,002
Mountain Ash	687	7	18	73	215	712	288	1,000
Neath	100	307	59	138	405	466	543	1,009
Nelson	9	649	62	77	202	720	279	999
Oldbury	10	472	207	89	234	689	313	1,002
Ramsgate	95	25	80	335	472	200	807	1,007
Reigate	36	63	97	373	424	196	797	993
Rochester	51	229	85	199	436	365	635	1,000
Romford	30	84	135	244	507	247	751	998
Royal Tunbridge Wells	25	28	100	398	439	153	837	990
Scunthorpe and Frodingham	52	483	43	141	277	578	418	996
Shipley	12	501	78	128	278	591	406	997
Shrewsbury	19	74	96	251	562	189	813	1,002
Slough	35	196	195	214	356	926	570	796

T A B L E 11(iii)

Continued.

Towns	(1)	(2)	(3)	(4)	(5)	F	S	Total
Spenborough	36	540	137	93	192	715	285	1,000
Swinton and Pendlebury	157	347	96	113	294	600	407	1,007
Tipton	13	536	124	107	220	673	327	1,000
Waterloo with Seaforth	9	67	141	205	578	217	783	1,000
Wednesbury	3	605	80	102	226	653	328	1,016
Wolstanton United	174	74	368	125	256	616	381	997
Darwen	43	367	272	94	226	682	320	1,002

Source. Compiled from Census of England and Wales 1931. Industry Tables. Table 3 pp. 182-209.

TABLE 11(iv)

ENGLAND AND WALES.

Proportions per 1,000 of total employed in each group, and in Production and Services respectively, in towns with 25-30,000 inhabitants in 1931.

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Abersychan	552	103	35	89	218	690	307	997
Ashington	727	2	23	52	195	752	247	999
Bebington and Bromborough	20	48	432	165	340	500	505	1,005
Bedlington	700	7	33	79	188	740	267	1,007
Chadderton	21	698	58	66	155	777	221	958
Chelmsford	21	349	78	204	346	448	550	998
Chepping Wycombe	10	45	523	153	263	578	416	994
Cleethorpes	129	61	100	230	490	290	720	1,010
Cosely	45	597	92	102	162	734	264	998
Dartford	38	186	242	158	366	466	524	990
Farnworth	117	509	83	83	211	709	294	1,003
Felling	288	128	220	106	254	636	360	996
Heywood	13	625	91	92	178	729	270	999
Hornchurch	42	92	142	227	495	276	722	998
Kidderminster	15	557	66	126	225	638	351	989
Llwchwr	237	428	34	87	198	699	285	984
Loughborough	16	491	109	154	229	616	380	996
Lytham St. Annes	33	64	135	378	404	232	782	1,014
Maesteg	600	8	35	88	268	643	356	999
Middleton	19	560	122	92	208	701	300	1,001
Ogmore and Garw	757	2	17	60	166	776	226	1,002
Rawtenstall	38	430	297	72	162	765	234	999
Royal Leamington Spa	16	165	95	310	412	276	722	998
St. Albans City	29	79	233	252	406	341	658	999
Sale	44	218	136	199	400	398	599	997
Salisbury	19	34	86	289	564	139	853	992
Stafford	44	225	254	142	340	523	482	1,005
Sutton Coldfield	38	188	126	299	365	352	664	1,016
Sutton in Ashfield	361	314	44	100	183	719	283	1,002
Taunton	17	74	206	225	493	297	718	1,015
Weston Super Mare	25	28	102	384	455	155	839	994
Woking	57	41	101	376	423	199	799	998
Worksop	438	21	86	164	288	545	452	997

Source. Compiled from Census of England and Wales 1931 ~~General~~ Industry Tables. Table 34. pp. 182-309

T A B L E 11(v)

ENGLAND AND WALES.

Proportions per 1,000 of total employed in each group, and in Production and Services respectively, in towns with 20-25,000 inhabitants in 1931.

Towns	(1)	(2)	(3)	(4)	(5)	P	Ss	Total
Aberdare	662	84	19	58	171	765	224	989
Adwick Le Street	758	21	29	60	136	808	196	1,004
Alfreton	412	180	63	102	234	655	336	991
Altrincham	37	273	123	329	354	435	563	998
Ashton in Makerfield	486	176	70	125	186	732	271	1,003
Bacup	77	351	355	63	154	783	217	1,000
Bexhill	38	23	60	477	365	123	862	985
Bingley	46	491	105	125	229	642	352	994
Canterbury	77	55	104	266	503	236	768	1,004
Carlton	68	211	195	114	481	474	545	1,019
Castleford	454	21	187	94	241	668	335	997
Coalville	419	139	99	84	206	706	292	998
Colne	19	592	89	86	219	700	304	1,004
Colwyn Bay	69	28	68	420	410	165	830	995
Fleetwood	366	66	74	126	369	506	485	991
Goole	42	46	89	146	675	177	821	998
Heanor	422	250	72	66	198	745	253	998
Hebburn	66	506	66	106	249	638	356	993
Hereford	26	40	162	285	477	228	762	990
Hindley	436	390	53	57	196	449	553	1,002
Ince in Makerfield	332	298	77	60	283	707	293	1,000
Kings Lynn	59	60	152	205	546	251	751	1,002
Long Eaton	10	450	115	104	318	575	422	997
Morecombe and Heysham	51	66	86	356	467	183	823	1,006
Morley	80	532	102	96	188	714	283	997
Newcastle under Lyme	105	79	294	195	345	478	540	1,018
Newton in Makerfield	100	435	143	101	225	678	326	1,004
New Windsor	14	71	108	293	516	195	806	1,001
Prestwich	14	179	165	149	492	359	641	1,000
Radcliffe	25	517	160	93	205	700	298	998
Redcar	30	309	66	211	385	405	596	1,001
Rugby	10	428	58	163	343	493	506	999
Sittingbourne and Milton	58	87	480	142	295	565	437	1,002
Stalybridge	20	551	77	106	244	648	350	998
Stanley	654	5	23	83	240	682	323	1,005
Swadlincote District	367	24	353	85	178	744	263	1,007

T A B L E 11(v)

Continued

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Thornaby on Tees	17	358	157	151	319	532	470	1,002
Todmorden	29	629	90	69	179	748	248	996
Tredegar	579	77	29	72	242	685	314	999
Wellingborough	30	63	479	128	298	572	426	998
Weymouth and Melcombe Regis	17	56	89	311	538	162	849	1,011
Whickham	312	125	103	149	310	540	459	999
Whitehaven	405	17	88	159	333	510	492	1,002
Whitley and Monkseaton	21	107	108	240	512	236	752	988
Willenhall	15	689	38	84	173	742	257	999
Winchester	22	33	87	336	528	142	864	1,006
Workington	141	329	59	131	339	529	470	999

Source. Census of England and Wales 1931. Industry Tables. Calculated from figures in Table 3, pp. 182-309.

Note. Hartlepool omitted, figures as follows.

Hartlepool	143	216	61	150	420	420	570	990

T A B L E 11(vi)

ENGLAND AND WALES.

Proportion per 1,000 of total employed in each group, and in Production and Services respectively, in towns with 15-20,000 inhabitants in 1931.

Towns	(1)	(2)	(3)	(4)	(5)	(P)	S	Total
Annfield Plain	658	11	23	74	239	692	313	1,005
Ashford	15	267	89	200	430	371	630	1,001
Atherton	350	356	44	68	179	750	247	997
Beeston	21	440	100	165	275	561	440	1,001
Bentley with Arksey	534	82	64	100	218	680	318	998
Billingham	59	175	487	101	178	721	279	1,000
Boston	85	29	194	193	498	308	691	999
Brandon and Byshottles	672	7	24	85	217	703	302	1,005
Bridgewater	22	57	348	186	386	427	572	999
Bridlington	49	35	91	391	433	175	824	999
Brighouse	56	500	122	115	205	678	320	998
Brownhills	552	66	110	118	159	728	277	1,005
Bury St. Edmunds	25	88	125	254	472	265	716	981
Buxton	100	48	69	331	451	217	782	999
Caterham and Warlingham	52	174	94	327	347	320	674	994
Cheadle and Gatley	40	147	123	213	476	310	689	999
Chertsey	52	174	94	327	347	320	674	994
Chester le Street	399	18	92	129	362	509	491	1,000
Clacton	39	26	78	427	425	143	852	995
Consisborough	680	11	112	62	136	803	198	1,001
Darlaston	4	753	39	68	124	796	192	988
Denton	22	241	447	78	205	710	283	993
Dukinfield	22	549	127	83	236	698	310	1,008
Durham	104	44	78	252	523	226	775	1,001
Eastleigh and Bishopstoke	10	412	41	125	411	463	536	999
Egham	40	75	142	359	383	257	742	999
Ellesmere Port and Whitby	52	363	180	128	275	595	403	998
Failsworth	40	480	158	90	232	678	322	1,000
Farnborough	6	14	28	149	796	48	945	995
Farnham	63	55	82	404	394	200	798	998
Frimley and Camberley	17	19	42	323	598	78	921	999
Gainsborough	13	352	156	154	323	521	477	998
Glossop	24	512	152	93	218	688	311	999
Gosforth	110	58	83	282	456	251	738	989
Grantham	18	175	120	235	444	313	679	992
Grays Thurrock	93	70	192	169	486	355	655	1,010

TABLE 11(vi)

Continued

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Great Crosby	14	59	105	294	522	178	816	994
Haslingden	36	638	58	83	185	732	268	1,000
Hemel Hempstead	37	36	457	177	290	530	467	997
Hetton	734	5	23	71	171	762	242	1,004
Hinckley	24	565	134	131	145	720	276	996
Horwich	35	623	87	78	165	745	243	988
Hoylake and West Kirby	34	26	81	372	488	141	860	1,001
Hoyland Nether	691	28	27	92	164	746	256	1,002
Hucknall	47	220	96	72	193	753	275	1,008
Kendal	23	139	276	210	354	438	564	1,002
Kirkby in Ashfield	550	100	60	61	231	710	292	1,002
Leek	8	647	53	107	186	708	293	1,001
Litherland	13	90	250	208	440	353	648	1,001
Maidenhead	28	77	132	362	401	237	763	1,000
Malvern	48	31	86	406	429	165	835	1,000
Mexborough	438	47	79	103	329	564	432	996
Mynyddislwyn	737	6	21	70	167	764	137	1,001
Newark	37	285	234	153	291	556	444	1,000
Newburn	511	73	72	106	235	656	341	997
Newton Abbot	50	71	117	281	483	238	764	1,002
Normanton	564	35	77	63	261	676	324	1,000
Northfleet	171	122	302	141	262	595	403	998
Northwich	33	76	392	166	333	501	499	1,000
Ormskirk	192	61	156	192	408	409	600	1,009
Paignton	39	26	78	448	409	143	857	10000
Penarth	50	46	106	266	520	202	786	988
Pontefract	354	15	183	117	334	543	451	994
Rawmarsh	502	205	34	89	175	741	264	1005
Redditch	19	521	160	117	177	700	294	994
Risca 397	(1468)	178	44	93	292	619	385	1004
Rothwell	317	132	224	77	248	673	325	998
Royton	14	708	41	76	160	763	236	999
Runcorn	49	87	340	148	368	476	516	992
Seaham Harbour	617	11	21	98	252	649	350	999
Sedgley	167	262	210	148	208	639	356	995
Sheerness	5	267	82	144	499	354	643	997
Spennymoor	422	40	63	153	319	525	472	997
Stourbridge	22	217	158	220	385	397	605	1,002
Tilbury	44	79	96	209	573	219	782	1,001
Tonbridge	21	31	227	264	457	278	711	999
Walton on Thames	46	92	105	417	337	243	754	997
Wshington	624	42	108	64	158	774	222	996
West Bridgford	11	145	162	167	520	318	687	1,005
West Houghton	293	378	60	68	188	731	256	
Wombwell	681	19	44	86	177	744	263	
Wrexham	155	27	122	187	497	304	68	
Yeovil	15	180	324	155	328	519	48	

TABLE 11(vii)

ENGLAND AND WALES.

Proportions per 1,000 of total employed in each group, and in Production and Services respectively, in towns with 10-15,000 inhabitants in 1931.

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Arnold	168	263	134	188	251	565	439	1,004
Audley	421	62	174	116	227	657	343	1,000
Aylesbury	18	61	298	210	406	377	616	993
Banbury	32	63	215	216	469	310	685	995
Bangor	53	30	72	260	579	155	839	994
Barnoldswick	26	739	35	64	138	800	202	1,002
Barnstaple	33	44	191	281	450	268	731	999
Basingstoke	42	224	148	201	380	414	581	995
Bedworth	305	389	106	71	125	800	196	996
Belper	150	411	66	163	212	627	375	1,002
Benfleet	82	45	114	317	441	241	758	999
Berwick upon Tweed	90	41	137	186	544	268	730	998
Beverley	38	112	199	231	421	349	652	1,001
Bishop Auckland	70	47	104	208	566	221	774	995
Blaenavon	657	37	21	94	188	715	282	997
Bognor Regis	22	23	69	444	434	114	878	992
Bolsover	686	13	37	89	175	736	264	1,000
Bolton upon Dearne	765	5	17	68	145	787	213	1,000
Bredbury and Romiley	41	280	261	119	301	581	420	1,001
Bridgend	82	54	80	225	557	216	782	998
Brierley Hill	32	344	316	100	211	692	311	1,003
Broadstairs and St. Peter's	44	21	50	414	466	115	880	995
Camborne	106	203	111	196	381	420	577	997
Carmarthen	77	51	82	235	549	210	784	994
Chichester	45	25	131	270	526	201	796	997
Clitheroe	70	434	88	137	272	592	409	1,001
Congleton	71	391	178	120	248	640	368	1,008
Consett	160	426	44	109	264	630	373	1,003
Cowes	13	305	55	274	349	373	623	996
Crompton	27	746	30	59	139	803	198	1,001
Crook	618	11	40	107	220	669	327	996
Dalton in Furness	213	258	64	145	310	535	455	990
Darton	663	87	43	76	132	793	208	1,001
Deal	183	14	71	304	426	268	730	998
Dorchester	28	51	107	268	544	186	812	998
Dorking	35	45	90	407	421	170	829	999
Droylsden	25	457	172	80	271	654	351	1,005

Town	(1)	(2)	(3)	(4)	(5)	P	S	Total
Earsdon	595	21	47	158	191	663	349	1,009
East Retford	65	129	129	243	430	323	673	996
Elland	24	557	133	97	180	714	277	991
Exmouth	31	33	90	451	397	154	848	1,002
Falmouth	13	155	57	317	445	225	762	987
Fareham	82	46	98	291	480	226	771	997
Faversham	51	52	213	189	491	316	680	996
Featherstone	687	16	54	64	179	757	243	1,000
Felixstowe	38	24	64	380	489	126	869	995
Frome	34	168	258	205	339	460	544	1,004
Glyncorwg	782	4	16	49	149	802	198	1,000
Godalming	19	76	93	388	423	188	811	999
Great Harwood	67	557	72	89	213	696	302	998
Hale	35	139	108	310	405	282	715	997
Harwich	29	52	46	208	662	127	870	997
Haydock	602	77	85	76	157	764	233	997
Hazel Grove and Bramhall	39	182	176	239	360	397	599	998
Hemsworth	694	12	21	89	177	727	266	993
Herne Bay	26	27	89	390	464	142	854	996
Hertford	32	26	256	281	405	311	686	997
Hitchin	36	88	190	252	469	314	677	991
Holmfirth	59	590	57	119	173	706	292	998
Holyhead	25	54	41	193	682	120	875	995
Horsforth	39	290	159	183	326	488	509	997
Horsham	35	61	116	315	463	212	778	990
Houghton le Spring	530	12	45	104	304	587	408	995
Irlam	45	275	341	95	233	661	328	989
Kingswood	33	105	474	124	263	612	387	999
Letchworth	18	270	241	165	285	539	450	989
Lewes	42	84	98	288	488	224	776	1,000
Leyland	50	519	210	86	144	770	230	1,000
Littleborough	19	608	103	96	175	730	271	1,001
Littlehampton	51	41	73	421	412	165	833	998
Llandudno	25	29	73	466	409	127	875	1,002
Long Benton	395	47	61	200	302	503	502	1,005
Lye and Wollescote	49	495	175	88	192	719	280	999
Maltby	755	14	13	93	123	782	216	998
Mangotsfield	45	66	371	171	346	482	517	999
Mansfield Woodhouse	595	165	57	93	177	727	270	997
March	203	23	49	170	553	275	723	998
Maryport	329	43	87	164	386	459	550	1,009
Melton Mowbray	28	265	121	210	373	414	583	997
Milford Haven	456	51	35	133	320	542	453	995
Mirfield	49	417	111	120	300	577	420	997
Mossley	21	632	62	89	207	715	296	1,011
Nantyglo and Blaina	650	5	35	72	238	690	316	1,006

Towns	(1)	(2)	(3)	(4)	(5)	F	S	Total
Newbury	17	48	186	313	430	251	743	994
Newport	39	54	131	247	525	224	772	996
North Bromsgrove	115	350	68	229	227	533	456	989
Oakengates	239	309	119	109	231	667	340	1,007
~~Ormskirk~~	~~198~~	~~61~~	~~156~~	~~198~~	~~408~~	~~409~~	~~600~~	~~1,009~~
Ossett	197	295	107	104	291	599	395	994
Oswaldtwistle	83	591	91	65	168	765	233	998
Otley	22	379	190	136	270	591	406	997
Padiham	57	596	73	87	196	726	283	1,009
Panteg	115	322	36	95	430	473	525	998
Pembroke	61	73	63	220	585	197	805	1,002
Penzance	43	36	74	297	546	153	843	996
Portland	190	12	21	145	635	223	780	1,003
Pudsey	27	522	117	107	238	660	345	1,005
Ramsbottom	29	608	96	77	189	733	266	999
Rhyl	19	35	74	373	493	128	866	994
Rhymney	684	4	51	53	296	739	259	998
Rickmansworth	42	38	194	358	366	274	724	998
Ripley	376	202	84	112	228	662	340	1,002
Rushden	17	17	728	83	157	762	240	1,002
Ryde	25	24	90	369	491	139	866	1,005
Ryton	642	27	30	115	186	699	301	1,000
Saddleworth	45	570	72	97	213	688	310	998
Selby	55	106	260	175	402	421	577	998
Sevenoaks	34	23	71	459	399	128	858	986
Shildon	190	300	43	106	361	533	467	1,000
Skelton and Brotton	478	160	24	139	198	662	337	999
Skipton	30	419	67	130	348	516	478	994
Sowerby	25	548	102	93	235	675	328	1,003
Spalding	313	29	92	200	359	434	559	993
Stanley (W.R)	411	172	87	82	248	670	330	1,000
Stratford upon Avon	60	88	127	326	400	275	726	1,001
Swinton	503	91	70	100	209	664	309	973
Teignmouth	40	29	66	435	434	135	869	1,004
The Matlocks	118	188	77	298	320	383	618	1,001
Thornton Cleveleys	99	46	195	309	350	340	659	999
Thurnscoe	794	5	11	58	134	810	192	1,002
Trowbridge	22	211	223	115	388	456	543	999
Truro	31	50	107	261	550	188	811	999
Turton	87	548	69	127	173	704	300	1,004
Tyldesley with Shakerley	466	270	36	64	163	772	227	999
Walton le Dale	72	512	117	72	222	701	294	995
Warsop	740	24	19	84	131	783	215	998
Warwick	26	204	125	267	370	355	637	992
Wath upon Dearne	612	10	54	100	229	676	329	1,005

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Wenlock	178	193	218	187	222	589	409	998
Whitby	50	23	75	377	472	148	849	997
Whitstable	61	51	80	349	451	192	800	992
Wigston Magna	39	342	225	112	281	605	393	998
Winsford	429	38	130	167	233	597	400	997
Wisbech	196	22	174	204	397	392	601	993
Wolverton	17	483	149	115	228	649	343	992
Worsborough	605	39	68	83	210	712	293	1,003
Worsley	231	313	83	115	264	627	379	1,006

TABLE 11(viii)

ENGLAND AND WALES.

Proportion per 1,000 of total employed in each group, and in Production and Services respectively, in towns with 5-10,000 inhabitants in 1931.

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Abergavenny	45	18	96	244	590	159	834	993
Aberystwyth	22	24	92	360	502	138	862	1,000
Abingdon	32	119	165	269	415	316	684	1,000
Abram	604	157	57	37	144	818	181	999
Alnwick	137	22	186	239	410	345	649	994
Alton	52	54	179	262	444	285	706	991
Ammanford	449	60	50	104	330	559	434	993
Andover	73	55	81	318	470	209	788	997
Ardsley East and West	224	288	91	65	326	603	391	994
Ashby de la Zouche	223	36	174	206	352	433	558	991
Aspull	383	311	89	67	150	783	217	1,000
Audenshaw	25	362	252	73	279	639	352	991
Baildon	26	432	86	142	312	544	454	998
Barrowford	51	649	50	90	180	730	270	1,000
Barton upon Humber	119	274	160	164	278	553	442	995
Beccles	47	95	261	230	363	403	593	996
Bedwas and Machen	399	112	42	129	315	563	444	1,007
Benfieldside	156	359	35	174	278	550	452	1,002
Biddulph	428	222	91	86	178	741	264	1,005
Bideford	52	57	143	316	451	232	767	999
Biggleswade	241	124	142	159	333	507	492	999
Billinge and Winstanley	457	74	140	97	241	671	338	1,009
Birstall	94	514	70	97	224	678	321	999
Bishops Stortford	45	90	135	288	436	270	724	994
Bletchley	50	52	219	154	527	321	681	1,002
Bodmin	53	20	74	211	640	147	851	998
Bollington	60	544	140	92	163	744	255	999
Braintree	23	497	54	154	267	574	421	995
Brecknock	35	24	85	260	591	144	851	995
Brentwood	14	33	102	296	550	149	846	995
Bridgnorth	53	245	74	277	356	372	633	1,005
Bridport	22	296	97	233	352	415	585	1,000
Brierfield	17	674	57	68	187	748	255	1,003
Brixham	180	43	78	324	374	301	698	999
Bromsgrove	55	268	148	215	316	471	531	1,002
Brynmawr	428	23	57	112	379	508	491	999

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Buckley	239	155	230	133	246	624	379	1,003
Burgess Hill	62	28	116	423	364	296	787	995
Burnham	37	29	99	419	416	165	855	1,000
Burry Port	272	150	63	102	394	485	496	981
Caernarvon	54	24	102	250	573	180	823	1,003
Chatteris	510	27	39	143	284	576	427	1,003
Cheriton	20	13	37	208	715	70	923	993
Chesham	27	34	372	253	304	433	557	990
Chippenham	23	285	133	229	328	441	557	998
Christchurch	61	36	90	411	394	187	805	992
Church	55	621	101	53	173	777	226	1,003
Cirencester	44	41	121	355	438	209	793	1,002
Clay Cross	601	103	24	99	172	728	271	999
Clayton le Moors	407	39	70	150	333	516	483	999
Cleator Moor	178	339	214	83	181	730	264	994
Clevedon	75	30	164	389	336	269	725	994
Connah's Quay	68	461	72	113	284	601	397	998
Conway	73	60	73	282	508	206	790	996
Cottingham	151	48	86	258	458	285	716	1,001
Cramlington	728	18	21	66	165	763	231	994
Cudworth	642	8	26	80	247	676	327	1,003
Cwmamman	611	45	50	76	219	707	295	1,002
Darfield	719	12	23	92	160	754	252	1,006
Dartmouth	28	119	48	236	572	195	808	1,003
Dawley	247	347	110	110	194	704	304	1,008
Denbigh	133	24	69	264	509	226	773	999
Devizes	31	22	153	310	478	206	788	994
Dunstable	61	123	404	150	262	588	412	1,000
Earby	46	689	39	74	155	774	229	1,003
East Dereham	104	89	186	216	400	379	616	995
East Grinstead	60	30	54	423	428	144	851	995
Eastwood	470	136	77	111	203	683	314	997
Egremont	454	51	55	116	326	560	442	1,002
Ely	224	29	133	212	382	386	594	980
Evesham	236	31	137	223	372	404	595	995
Farsley	22	578	93	88	221	693	309	1,002
Ffestiniog	594	5	45	116	239	644	355	999
Flint	42	624	64	99	170	730	269	999
Formby	63	30	79	327	502	172	829	1,001
Fulwood	41	105	93	173	574	239	747	986
Golborne	278	357	118	89	154	753	243	996
Golcar	20	707	50	168	158	777	226	1,003
Great Berkhamp-stead	27	31	302	260	350	360	610	970
Great Driffield	85	83	152	245	425	320	670	990
Gulsborough	221	128	66	212	372	415	584	999
Guiseley	39	520	70	107	262	629	369	998
Halstead	44	386	102	178	280	532	458	990
Harpenden	39	62	139	325	434	240	759	999
Haverfordwest	47	50	102	258	536	199	1794	993

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Haworth	48	646	77	75	154	771	229	1,000
Hayward's Heath	40	46	63	358	482	149	840	989
Hebden Bridge	12	247	476	103	156	735	259	994
Heckmondwike	24	478	128	95	270	630	365	995
Henley on Thames	26	69	101	404	397	196	801	997
Hessle	68	78	81	319	455	227	774	1,001
Hexham	82	37	97	335	453	216	788	1,004
Hipperholm	70	392	140	148	250	602	398	1,000
Hoddesdon	174	51	147	276	356	372	632	1,004
Holbeach	578	21	50	133	216	649	349	998
Hoole	25	115	112	153	597	252	750	1,002
Horbury	150	340	117	119	266	607	385	992
Huthwaite	455	277	49	62	159	781	221	1,002
Huyton with Roby	106	130	156	278	329	394	607	1,001
Hythe	41	21	83	402	448	145	850	995
Ilfracombe	54	22	65	435	426	141	861	1,002
Ilkley	28	97	73	380	421	198	801	999
Kearsley	138	489	122	77	172	749	249	998
Kempston	41	179	255	168	348	475	516	991
Kenilworth	77	292	90	280	247	459	537	996
Kidsgrove	364	101	217	81	238	682	319	1,001
Knaresborough	74	49	87	368	437	210	805	1,015
Knottingley	87	31	486	105	288	604	393	997
Knutsford	64	59	121	388	361	244	749	993
Leadgate	616	115	23	73	165	754	238	992
Leatherhead	39	85	46	436	389	170	825	995
Leighton Buzzard	100	62	212	263	361	374	624	998
Leominster	122	53	91	279	445	266	724	990
Lichfield	66	61	114	324	430	241	751	992
Linthwaite	24	697	76	70	135	797	205	1,003
Little Hulton	342	373	54	81	151	769	232	1,001
Llantarnam	87	404	129	117	260	620	377	997
Loftus	329	306	33	105	224	668	329	997
Louth	68	36	145	285	475	249	760	1,009
Ludlow	34	25	100	322	512	159	834	993
Lymington	30	125	74	372	394	229	766	995
Lynn	113	153	148	245	334	414	579	993
Maldon	75	148	88	236	449	511	688	999
Market Harborough	24	71	456	170	271	551	441	992
Marlow	35	28	224	375	327	287	702	999
Marple	37	342	100	163	354	479	517	996
Marsden	15	773	26	61	123	814	184	998
Meltham	67	642	38	93	149	747	242	989
Middlewich	227	29	343	132	222	649	354	1,003
Midsomer Norton	372	30	177	155	266	579	421	1,000
Millom	301	200	52	157	292	553	449	1,002
Milnrow	53	658	65	82	143	776	225	1,001
Milton	113	28	50	446	352	191	798	989
Minehead	40	23	68	448	421	131	869	1,000

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Mold	90	193	84	198	441	367	639	1,006
Morpeth	165	76	65	203	476	306	679	985
Nantwich	25	77	399	175	325	501	498	999
Neston and Parkgate	110	31	57	444	353	198	797	995
Newbiggin by the Sea	686	8	22	85	228	686	313	999
Newhaven	41	56	61	170	656	158	826	984
Newmarket	32	34	71	308	527	157	835	992
New Mills	55	499	90	122	232	634	354	988
Newquay	27	80	53	483	355	160	838	998
Newtown and Llanllwchaiarn	105	83	148	185	476	336	661	997
Northam	84	83	67	419	339	234	758	992
Old Fletton	28	76	478	102	296	582	398	980
Orrell	291	174	169	109	259	634	368	1,002
Oswestry	38	47	89	228	588	174	816	990
Paul	543	26	69	126	230	638	356	994
Penrith	69	41	91	271	518	201	789	990
Pontypool	307	176	58	145	313	541	458	999
Porthcawl	107	39	68	346	440	214	786	1,000
Portslade by Sea	49	61	124	386	366	224	752	976
Prescott	52	570	79	107	192	701	299	1,000
Prudhoe	638	14	29	115	202	681	317	998
Purfleet	305	23	229	140	296	557	436	993
Quarry Bank	54	599	128	81	145	781	226	1,007
Queensbury	64	566	101	94	163	731	257	988
Ramsey	525	28	57	162	231	610	393	1,003
Rayleigh	122	38	115	272	445	275	717	992
Redruth	94	63	135	238	477	292	715	1,007
Ripon	50	47	165	295	439	262	734	996
Rishton	89	549	123	59	181	761	246	1,001
Royston	748	5	9	71	146	762	217	979
Rugeley	398	44	148	172	239	590	411	1,001
Saffron Walden	178	42	80	291	405	300	696	996
St. Austell	144	26	92	274	452	262	726	988
St Helens	52	43	57	416	419	152	835	987
St Ives	140	29	123	364	343	292	707	999
Sandbach	139	273	172	133	285	584	418	1,002
Sandown	45	16	60	465	417	121	882	1,003
Seaford	36	19	46	422	477	101	899	1,000
Seaton Delaval	637	13	27	137	188	677	325	1,002
Shanklin	27	22	61	515	373	110	888	998
Shepshed	160	428	180	89	142	768	231	999
Sherborne	36	43	151	324	440	230	764	994
Shoeburyness	18	16	86	192	687	120	879	999
Shoreham by Sea	78	72	92	314	448	242	762	1,004
Short Heath	192	502	49	97	157	743	254	997
Sidmouth	30	30	71	513	352	131	865	996

Towns	(1)	(2)	(3)	(4)	(5)	P	S	Total
Skegness	73	29	50	450	394	152	844	996
Skelmersdale	405	91	235	72	194	731	266	997
Slaithwaite	37	709	47	48	145	793	193	986
Sleaford	108	36	91	244	516	235	760	995
Southborough	56	37	143	376	381	236	757	993
Southwick	53	64	101	363	416	218	779	997
Stamford	38	244	113	225	376	395	601	996
Standish with Langtree	393	266	80	92	172	739	265	1,004
Stevenage	89	59	195	604	349	343	653	996
Stocksbridge	210	495	48	103	141	751	244	995
Stone	33	42	383	205	334	458	539	997
Stourport	30	446	175	165	183	651	348	999
Stroud	22	135	270	194	374	427	568	995
Sudbury	48	216	152	210	368	416	578	994
Swanage	69	10	62	465	402	141	867	1,008
Swanscombe	253	77	340	91	236	670	327	997
Tamworth	245	85	220	149	301	550	450	1,000
Tanfield X	676	9	18	96	202	693	298	992
Tettenhall	37	169	95	406	292	301	698	999
Tiverton	105	247	92	233	328	444	561	1,005
Tottington	48	546	88	111	207	682	318	1,000
Ulverston	70	178	124	234	389	372	623	995
Upholland	585	85	164	104	258	634	362	996
Urmston	29	264	167	139	418	460	547	1,007
Uttoxeter	27	260	147	205	361	434	566	1,000
Ventnor	26	18	72	464	416	116	880	996
Walmer	52	13	52	263	621	117	884	1,001
Ware	88	42	284	255	322	414	577	991
Warminster	93	74	185	281	368	350	649	999
Wednesfield	63	508	78	118	230	649	348	997
Weetslade	595	20	31	113	242	646	355	1,001
Wellington (Sal)	32	137	141	225	458	310	683	993
Wellington (Som)	70	362	114	187	265	546	452	998
Welshpool	225	24	88	263	398	337	661	998
Welwyn Garden City	34	151	144	243	436	329	679	1,008
Weybridge	18	136	65	418	361	219	779	998
Whitchurch	70	104	104	283	436	278	719	997
Whitefield	16	388	142	143	310	546	453	999
Whittlesey	393	17	255	127	203	665	330	995
Whitwood	568	28	187	71	135	773	206	979
Whitworth	97	661	45	58	136	803	194	997
Willington	741	3	22	70	164	766	234	1,000
Wilmslow	58	93	110	388	351	261	739	1,000
Windermere	50	59	82	458	348	191	806	997
Windlesham	123	20	42	526	281	185	807	992
Wokingham	75	25	121	393	384	211	777	988
Yeadon	20	621	57	116	177	698	293	991

ENGLAND

Total population and proportions per 1,000 of total employed in each group and in Production and Services respectively in the county and the individual towns in 1931.

BEDFORDSHIRE

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	(P)	S
Bedfordshire (Administrative County)	220,525	120	144	255	184	276	519	460
Urban Districts	141,625							
Ampthill	2,168	16						
Bedford	40,554	16	172	147	246	413	335	659
Biggleswade	5,844	241	124	142	159	333	507	492
Dunstable	8,976	61	123	404	150	262	588	412
Kempston	5,390	41	179	255	168	348	475	516
Leighton Buzzard	7,030	100	62	212	263	361	374	624
Luton	68,583	7	224	417	122	231	648	353
Sandy	3,140	446	27	77	188	263	550	451

BERKSHIRE

Berkshire (including County Boroughs)	311,453	90	58	151	312	386	299	698
Berkshire (Administrative County)	214,304	119	168	98	364	367	265	731
County Borough Reading	97,149	27	79	266	199	402	372	602
Urban Districts	71,943							
Abingdon	7,241	32	119	165	269	415	316	684
Maidenhead	17,515	28	77	132	362	401	237	763
Newbury	13,340	17	48	186	313	430	251	743
New Windsor	20,287	14	771	108	292	516	193	808
Wallingford	2,840							
Wantage	3,426							
Wokingham	7,294	75	25	121	393	384	211	777

E N G L A N D

Total population and proportions per 1,000 of total employed in each group and in Production and Services respectively in the county and the individual towns in 1931.

B U C K I N G H A M S H I R E

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Buckinghamshire (Administrative County)	271,586	99	87	209	273	327	395	600
Urban Districts	124,169							
Aylesbury	13,387	18	61	298	210	406	377	616
Beaconsfield	4,846							
Bletchley	6,170	50	52	219	154	527	321	681
Buckingham	3,083	105	27	162	337	365	294	702
Chepping Wycombe	27,988	10	45	523	153	263	578	416
Chesham	8,812	27	34	372	253	304	433	557
Eton	2,005							
Linsdale	2,433	35						
Marlow	5,086	35	28	224	375	327	287	702
Newport Pagnell	3,956							
Slough	33,530	35	196	195	214	366	26	570
Wolverton	12,873	17	483	149	115	228	649	343

C A M B R I D G E S H I R E

Cambridgeshire (Administrative County)	140,004	202	45	136	238	369	383	607
Urban District.	66,789							
Cambridge	66,789	20	57	152	280	488	229	768

C H E S T E R

Towns	Popn.	(1)	(2)	(3)	(4)	(5)		
Chester (including County Boroughs)	1,087,655	71	194	165	192	355	430	549
Chester (Administrative County)	675,296	105	206	166	192	321	477	513
County Boroughs	412,359							
Birkenhead	147,803	11	92	146	210	538	249	748
Chester	41,440	25	138	121	244	472	284	716
Stockport	125,490	10	308	209	138	330	527	468
Wallasey	97,626	13	48	143	215	578	204	793
Urban Districts	469,184							
Aldersley Edge	3,145							
Alsager	2,852							
Altrincham	21,356	37	275	123	229	334	435	563
Bebington and Bromborough	26,740	20	48	132	165	340	500	505
Bollington	5,027	560	540	100	92	163	744	255
Bowdon	3,285							
Bredbury and Romiley	10,876	41	280	261	119	301	581	420
Buglawton	1,876							
Cheadle and Gatley	18,473	40	147	123	213	476	310	689
Compstall	865							
Congleton	12,885	71	391	178	120	248	640	368
Crewe	46,069	7	306	140	112	441	453	553
Dukinfield	19,311	22	549	127	83	256	698	319
Ellesmere Port and Whitby	18,911	52	363	180	128	275	595	403
Hale	10,667	35	139	108	310	405	282	715
Handforth	1,031							
Hazel Grove and Bramhall	13,300	39	182	176	239	360	397	599
Hollingworth	2,299							
Hoole	5,889	25	115	112	153	597	252	750
Hoylake and West Kirby	16,631	34	26	81	372	488	141	860
Hyde	32,075	16	398	260	106	220	674	326
Knutsford	5,879	64	59	121	388	361	244	749
Lymm	5,643	113	153	148	245	334	414	579
Macclesfield	34,905	25	392	178	131	262	595	393
Marple	7,389	37	342	100	163	354	479	517
Middlewich	5,458	277	29	343	132	222	649	354

CHESTER (continued)

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Mottram in Longdendale	2,636							
Nantwich	7,133	25	77	399	173	325	501	498
Neston and Parkgate	5,676	110	31	57	444	353	198	797
Northwich	18,732	33	76	392	166	333	501	499
Runcorn	18,127	49	87	340	148	368	476	516
Sale	28,071	44	218	156	199	400	398	599
Sandbach	6,411	139	273	172	133	285	584	418
Stalybridge	24,831	20	551	77	106	244	648	350
Tarporley	2,452							
Wilmslow	9,760	58	93	110	388	351	261	739
Winsford	10,998	429	38	130	167	233	597	400
Yeardsley cum Whaley	1,745							

C O R N W A L L

Towns	Popm.	(1)	(2)	(3)	(4)	(5)	P	S
Cornwall (Administrative County)	317,968	285	55	62	243	352	402	595
Urban Districts	144,391							
Bodmin	5,526	50	20	274	811	640	147	851
Callington	1,801							
Camborne	14,160	106	203	111	196	381	420	577
Falmouth	13,492	13	155	57	317	445	225	762
Fowey	2,382							
Hayle	9126							
Helston	2,548							
Launceston	4,071							
Liskeard	4,868							
Looe	2,877							
Lostwithiel	1,327							
Ludgvan	1,897							
Madron	3,273							
Newquay	5,959	27	80	53	483	355	160	838
Padstow	1,919							
Paul	5,814	543	26	69	126	230	638	356
Penryn	3,414							
Penzance	11,331	43	36	74	297	546	153	843
Phillack	3,233							
Redruth	9,904	94	63	135	238	477	292	715
St. Austell	8,295	144	26	92	274	452	262	726
St. Ives	6,687	140	29	123	364	343	292	707
St. Just	4,359							
Saltash	3,603							
Stratton and Bude	3,836							
Torpoint	3,975							
Truro	11,064	31	50	107	261	550	188	811
Wadebridge	2,460							

C U M B E R L A N D

Cumberland (including County Borough)	263,151	291	103	100	179	323	494	502
Cumberland (Administrative County)	205,847	383	79	66	182	289	528	471
County Borough Carlisle	57,304	12	178	210	169	422	400	591
Urban Districts	14,645							
Arlecdon and Frizington	4,328							
Aspatria	3,239							
Cleator Moor	6,581	407	39	70	150	333	516	483
Cockermouth	4,789							
Egremont	6,017	454	51	55	116	326	560	442
Harrington	4,128							
Holme Cultram	4,743							
Keswick	4,635							
Maryport	10,183	329	43	87	164	386	459	550
Millom	7,405	301	200	52	157	292	553	449
Penrith	9,066	69	41	91	271	518	201	789
Whitehaven	21,159	405	17	88	159	333	510	492
Wigton	3,521							
Workington	24,751	141	329	59	131	339	529	470

D E R B Y S H I R E

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Derbyshire (including County Borough)	757,373	270	240	94	130	259	604	389
Derbyshire (Administrative County)	614,971	331	209	89	133	234	629	367
County Borough Derby	142,403	11	381	111	136	362	503	498
Urban Districts	316,476							
Alfreton	21,234	412	180	63	102	234	655	336
Alvaston and Boulton	3,280							
Ashbourne	4,506							
Bakewell	3,028							
Baslow and Bubnell	854							
Belper	13,024	150	411	66	163	212	627	375
Bolsover	11,811	686	13	37	89	175	736	264
Bonsall	1,173							
Brampton and Walton	2,323							
Buxton	15,349	1000	48	69	331	451	217	782
Chesterfield	64,160	222	319	122	129	304	563	433
Clay Cross	8,497	601	103	24	99	172	728	271
Dronfield	4,530							
Glossop	19,509	24	512	152	93	218	688	311
Heage	4,054							
Heanor	22,381	423	250	72	85	168	745	253
Ilkeston	32,813	280	396	74	80	171	750	251
Long Eaton	22,345	10	450	115	104	318	575	422
New Mills	8,551	55	499	90	122	232	634	354
North Darley	4,095							
Ripley	13,413	376	202	84	112	228	662	340
South Darley	731							
Swadlincote District	20,308	367	24	353	85	178	744	263
The Matlocks	10,599	118	188	77	298	320	383	618
Wirksworth	3,910							

D E V O N S H I R E

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Devonshire (including County Borough)	732,968	150	79	95	275	412	324	687
Devonshire (Admininstrative County)	458,757	214	41	84	323	333	339	656
County Boroughs	274,211							
Exeter	66,029	19	68	156	252	507	243	759
Plymouth	208,182	11	149	101	174	553	261	727
Urban Districts	230,416							
Ashburton	2,505							
Axminster	2,326							
Bampton	1,392							
Barnstaple	14,700	33	44	191	281	450	268	731
Bideford	8,778	52	37	143	316	451	232	767
Brixham	8,145	180	43	78	324	374	301	698
Buckfastleigh	2,410							
Budleigh Salterton	3,162							
Crediton	3,490							
Dartmouth	6,708	28	119	48	236	572	195	808
Dawlish	4,580							
Exmouth	14,591	31	33	90	451	397	154	848
Great Torrington	2,913							
Holsworthy	1,403							
Honiton	3,008							
Ilfracombe	9,175	54	22	65	435	426	141	861
Ivybridge	1,609							
Kingsbridge	2,278							
Lynton	2,011							
Newton Abbot	15,010	50	71	117	281	483	238	764
Northam	5,563	84	83	667	419	339	234	758
Okehampton	3,352							
Ottery St. Mary	3,713							
Paignton	18,414	39	26	78	448	409	143	857
Salcombe	2,384							
Seaton	2,349							
Sidmouth	6,126	30	30	71	513	352	131	865
South Molton	2,832							
Tavistock	4,471							
Teignmouth	10,017	40	29	66	435	434	135	869
Tiverton	9,610	105	247	92	233	328	444	561
Torquay	46,165	21	26	76	457	420	123	877
Totnes	4,526							

D O R S E T

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Dorset (Administrative County)	239,352	166	43	104	304	381	313	685
Urban Districts	134,491							
Blandford Forum	3,370							
Bridport	5,917	22	296	97	233	352	415	585
Dorchester	10,030	28	51	107	268	544	186	812
Lyme Regis	2,620							
Poole	57,211	26	37	162	369	400	225	769
Portland	12,019	190	12	21	145	636	223	780
Shaftesbury	2,369							
Sherborne	6,542	36	43	151	324	440	230	764
Swanage	6,274	69	10	62	465	402	141	867
Wareham	2,058							
Weymouth and Melcombe Regis	22,188	17	56	89	311	538	162	849
Wimborne Minster	3,895							

DURHAM

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Durham (including County Boroughs	1,486,175	323	117	91	145	324	531	469
Durham (Administrative County)	924,228	466	86	70	119	256	622	375
County Boroughs	561,947							
Darlington	72,086	19	305	98	193	381	422	574
Gateshead	122,447	77	172	186	160	423	435	583
South Shields	113,455	153	110	66	178	487	329	665
Sunderland	185,824	112	134	115	203	420	361	623
West Hartlepool	68,135	49	179	118	196	482	346	678
Urban Districts	520,033							
Annfield Plain	15,931	658	11	23	74	239	692	313
Barnard Castle	5,884							
Benfieldside	9,193	156	359	35	174	278	550	452
Bilingham	17,972	59	179	487	101	178	721	279
Bishop Auckland	12,277	70	47	104	208	566	221	774
Blaydon	32,265	549	78	57	96	229	684	325
Brandon and Byshottles	17,116	672	7	24	85	217	703	302
Chester le Street	16,640	399	18	92	129	362	509	491
Consett	12,354	160	426	44	109	264	630	373
Crook	11,690	618	11	40	107	220	669	327
Durham	16,224	104	44	78	252	523	226	775
Felling	27,040	288	128	220	106	249	638	360
Hartlepool	20,534	143	216	61	150	420	420	570
Hebburn	24,123	66	506	66	106	249	638	355
Hetton	17,665	734	5	23	71	171	762	242
Houghton le Spring	10,616	530	12	45	104	304	587	408
Jarrow	32,018	34	329	70	167	400	433	567
Leadgate	6,395	616	115	23	73	165	754	238
Ryton	14,204	642	27	30	115	186	699	301
Seaham Harbour	19,399	617	11	21	98	252	649	350
Shildon	12,691	190	300	43	106	361	533	467
Spennymoor	16,369	422	40	63	153	319	525	472
Stanhope	1,746							
Stanley	24,460	654	5	23	83	240	682	323
Stockton on Tees	67,722	20	236	190	188	360	446	548
Tanfield	9,236	676	9	18	96	202	693	298
Tow Law	3,559							
Washington	16,989	624	42	108	64	158	774	222
Whickham	20,756	312	125	103	149	310	540	459
Willington	8,964	741	3	22	70	164	766	234

ELY, ISLE OF. ADMINISTRATIVE COUNTY.

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Ely, Isle of (Administrative County)	77,698	425	20	95	147	303	540	450
Urban Districts	45,107							
Chatteris	5,153	510	27	39	143	284	576	427
Ely	8,381	224	29	133	212	382	386	594
March	11,266	203	23	449	170	553	275	723
Whittlesey	8,301	393	17	255	127	203	665	330
Wisbech	12,006	196	22	174	204	397	392	601

E S S E X

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Essex (including County Borough)	**1,755,459**	**56**	**90**	**199**	**205**	**433**	**345**	**638**
Administrative County	**1,198,672**	**78**	**91**	**175**	**213**	**440**	**344**	**653**
County Boroughs	**556,786**							
G.L. East Ham	142,394							
Southend on Sea	**120,115**	**13**	**54**	**117**	**285**	**531**	**184**	**816**
G.D. West Ham	294,278							
Urban Districts	**918,631**							
G.L. Barking Town	51,270							
Benfleet	**12,091**	**82**	**45**	**114**	**317**	**441**	**241**	**758**
Braintree	**8,912**	**23**	**497**	**54**	**154**	**267**	**574**	**421**
Brentwood	**7,208**	**14**	**33**	**102**	**296**	**550**	**149**	**846**
Brightlingsea	**4,147**							
G.L. Buckhurst Hill	5,486							
Burnham on Crouch	**3,416**							
Canvey Island	**3,532**							
Chelmsford	**26,537**	**21**	**349**	**78**	**204**	**346**	**448**	**550**
G.L. Chingford	22,053							
Clacton	**15,848**	**39**	**26**	**78**	**427**	**425**	**143**	**852**
Colchester	**48,701**	**30**	**75**	**158**	**179**	**552**	**263**	**731**
G.L. Dagenham	89,362							
Epping	**4,956**							
Frinton on Sea	**2,196**							
Grays Thurrock	**18,173**	**93**	**70**	**192**	**169**	**486**	**358**	**655**
Halstead	**5,883**	**44**	**386**	**102**	**178**	**280**	**532**	**458**
Harwich	**12,046**	**29**	**52**	**46**	**208**	**662**	**127**	**870**
Hornchurch	**28,417**	**42**	**92**	**142**	**227**	**495**	**276**	**722**
G.L. Ilford	131,061							
G.L. Leyton	128,313							
G.L. Loughton	7,390							
Maldon	**6,559**	**75**	**148**	**88**	**236**	**449**	**311**	**685**
Purfleet	**8,511**	**305**	**23**	**229**	**140**	**296**	**557**	**436**
Rayleigh	**6,256**	**122**	**38**	**115**	**272**	**445**	**275**	**717**
Romford	**35,918**	**30**	**84**	**133**	**244**	**507**	**247**	**751**
Saffron Walden	**5,930**	**178**	**42**	**80**	**291**	**405**	**300**	**696**
Shoeburyness	**6,720**	**18**	**16**	**86**	**192**	**687**	**120**	**879**
Tilbury	**16,825**	**44**	**79**	**96**	**209**	**573**	**218**	**782**
G.L. Waltham Holy Cross	7,115							

ESSEX (continued)

Towns.	Popn.
G.L. Walthamstow	132,972
Walton on the Naze	3,071
G.L. Wanstead	19,183
West Mersea	2,067
Witham	4,367
Wivenhoe	2,193
G.L. Woodford	23,946

G L O U C E S T E R

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Gloucester	786,000	88	87	231	221	378	406	599
Gloucester (Administrative County)	336,051	198	90	138	267	304	426	571
County Boroughs	449,949							
Bristol	397,012	9	82	302	184	420	893	604
Gloucester	52,937	14	100	224	195	462	338	657
Urban Districts	111,869							
Anne	1,033							
Charlton Kings	4,763							
Cheltenham	49,418	32	49	131	365	418	212	783
Cirencester	7,209	44	41	121	355	438	209	793
Coleford	2,777							
Kingswood	13,286	33	105	474	124	263	612	387
Mangotsfield	11,251	45	66	371	171	346	482	517
Nailsworth	3,132							
Newnham	1,035							
Stow on the Wold	1,266							
Stroud	8,364	22	138	270	194	374	427	568
Tetbury	2,237							
Tewkesbury	4,352							
Westbury on Severn	1,746							

HEREFORD

ADMINISTRATIVE COUNTY

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Hereford	111,767	301	30	74	283	299	418	582
Urban Districts	41,201							
Bromyard	1,570							
Hereford	24,163	26	40	162	285	477	228	762
Kington	1,742							
Ledbury	3,284	40	32	103	317	470	198	787
Leominster	5,707	122	53	91	279	445	266	724
Ross	4,735							

HERTFORDSHIRE

ADMINISTRATIVE COUNTY.

	Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
	Hertfordshire	401,206	89	69	187	284	373	345	657
	Urban Districts	280,977							
	Baldock	3,170	56	296	149	221	277	501	498
G.L.	Barnet	14,726							
	Bishop's Stortford	9,510	45	90	135	288	436	270	724
G.L.	Bushey	11,245							
G.L.	Cheshunt	14,656							
	Chorleywood	3,295							
G.L.	East Barnet Valley	18,549							
	Great Berkhampstead	8,052	27	31	302	260	350	360	610
	Harpenden	8,349	39	62	139	325	434	240	759
	Hemel Hampstead	15,119	37	36	457	177	290	530	467
	Hertford	11,378	32	26	256	283	405	314	686
	Hitchin	14,383	36	88	190	252	469	314	677
	Hoddesdon	6,811	174	51	147	276	356	372	632
	Letchworth	14,454	18	270	241	165	285	539	450
	Rickmansworth	10,809	42	38	194	358	366	274	724
	Royston	3,831	68	57	133	309	428	258	737
	St Albans	28,624	29	79	233	252	406	341	658
	Sawbridgeworth	2,604	130	42	181	313	336	353	649
	Stevenage	5,476	89	59	195	304	349	343	653
	Tring	4,364	86	39	168	321	386	291	707
	Ware	6,181	88	42	284	255	322	414	577
G.L.	Watford	56,805	10	73	236	234	452	318	688
	Welwyn Garden City	8,586	34	151	144	243	436	389	679

H U N T I N G D O N S H I R E

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Huntingdon	56,206	508	54	168	197	268	530	465
Urban Districts	25,738							
Godmanchesterl	,993							
Huntingdon	4,106							
Old Fletton	7,481	28	76	478	102	296	582	398
Ramsey	5,180	525	28	57	162	231	610	393
St Ives	2,664							
St Neots	4,314							

K E N T

	Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
	Kent (including County Borough)	1,219,273	109	89	121	262	412	319	674
	Kent (Administrative County)	1,194,827	109	90	124	262	416	323	678
	County Borough								
	Canterbury	24,446	77	55	104	265	503	236	768
	Urban Districts	853,565							
	Ashford	15,248	15	267	89	200	430	371	630
G.L.	Beckenham	43,832							
G.L.	Bexley	32,949							
	Broadstairs and St. Peter's	12,745	44	21	50	414	466	115	880
G.L.	Bromley	45,374							
	Chatham	42,999	22	249	88	184	452	359	636
	Cheriton	8,089	20	13	37	208	715	70	923
G.L.	Chislehurst	9,876							
G.L.	Crayford	15,896							
	Dartford	28,871	38	186	242	158	366	466	524
	Deal	13,681	183	14	71	304	426	268	730
	Dover	41,097	75	32	98	217	572	205	789
G.L.	Erith	32,789							
	Faversham	10,091	51	52	213	189	491	316	680
	Folkestone	35,482	25	31	67	398	482	123	880
	Gillingham	61,536	35	214	51	122	580	810	702
	Gravesend	55,495	44	92	186	200	477	322	677
	Herne Bay	11,249	26	27	89	390	464	142	854
	Hythe	8,398	41	21	83	402	448	145	850
	Lydd	2,778							
	Maidstone	42,280	43	67	259	221	415	369	636
	Margate	31,341	20	20	75	414	473	115	887
	New Romney	1,786							
	Northfleet	16,428	171	122	302	141	363	595	403
G.L.	Penge	27,771	95						
	Queenborough	2,941							
	Ramsgate	33,603	95	25	80	335	472	200	807
	Rochester	31,193	51	229	85	199	436	365	635
	Sandgate	2,597							
	Sandwich	3,287							
	Sevenoaks	10,484	34	23	71	459	399	128	858
	Sheerness	16,738	5	267	82	144	499	354	643
G.L.	Sidcup	12,355							
	Sittingbourne and Milton	20,177	58	27	480	142	295	565	437
	Southborough	7,350	56	37	143	376	381	236	757

KENT (continued).

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Swanscombe	8,543	253	77	340	91	236	670	327
Tenterden	3,478							
Tonbridge	16,333	21	31	227	264	457	278	711
Tunbridge Wells	35,365	25	28	100	389	439	153	837
Walmer	5,335	52	13	52	263	621	117	884
Whitstable	11,201	61	51	80	349	451	198	8800
Wrotham	4,510							

L A N C A S T E R

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Lancaster	5,039,455	63	296	169	134	351	528	485
Lancaster (Administrative County)	1,795,073	127	368	125	119	261	620	380
County Boroughs	3,244,382							
Barrow in Furness	66,202	13	485	73	123	296	581	419
Blackburn	122,697	15	430	131	111	318	576	429
Blackpool	101,553	18	42	132	358	446	192	804
Bolton	177,250	31	517	80	110	248	628	358
Bootle	76,770	3	115	178	162	534	296	696
Burnley	98,258	69	490	96	92	251	655	343
Bury	56,182	10	421	192	112	274	623	386
Liverpool	855,688	7	84	210	165	528	301	693
Manchester	766,378	10	200	253	134	397	483	530
Oldham	140,314	14	612	66	96	225	692	321
Preston	119,001	9	377	138	134	337	524	471
Rochdale	90,263	9	567	94	108	221	670	329
St. Helens	106,789	235	54	350	106	252	639	358
Salford	223,438	13	247	239	118	368	499	486
Southport	78,925	23	67	121	327	459	211	786
Warrington	79,317	6	373	242	112	267	621	379
Wigan	85,357	232	221	134	107	305	587	412
Urban Districts	1,531,112							
Abram	6,660	604	157	57	37	144	818	181
Accrington	42,991	46	540	98	78	245	684	323
Adlington	4,189							
Ashton in Makerfield	20,546	486	176	70	85	186	732	271
Aston under Lyne	51,573	33	415	135	114	393	583	417
Aspull	7,193	383	311	98	67	150	783	217
Atherton	19,989	350	356	44	68	179	750	247
Audenshaw	8,461	35	362	252	73	279	639	352
Bacup	20,599	77	351	355	63	154	783	217
Barrowford	5,299	31	649	50	90	180	730	270
Billinge and Winstanley	5,111	457	74	140	97	241	671	338
Blackrod	3,599							
Brierfield	7,696	17	674	57	68	187	748	255
Garnforth	3,192							
Chadderton	37,450	21	698	58	66	155	777	221
Chorley	30,796	53	512	105	113	216	670	329
Church	6,187	55	621	101	53	173	777	226

LANCASTER (cont.)

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Clayton le Moors	7,909	178	339	214	83	181	730	264
Clitheroe	12,008	70	434	88	137	272	592	409
Colne	23,791	19	592	89	85	219	700	304
Crompton	14,764	27	746	30	59	139	803	198
Croston	1,934							
Dalton in Furness	10,399	213	258	64	145	310	535	455
Darwen	56,072	43	367	272	94	226	682	320
Denton	17,384	22	241	447	78	205	710	283
Droylsden	13,274	25	457	172	80	271	654	351
Eccles	44,416	34	298	137	141	393	469	534
Failsworth	16,726	40	480	158	90	232	678	322
Farnworth	28,717	117	509	83	83	211	709	294
Fleetwood	23,001	366	66	74	126	359	506	485
Formby	7,965	63	30	79	327	502	172	829
Fulwood	7,387	41	105	93	173	574	239	747
Golborne	7,338	278	357	118	89	154	753	243
Grange	2,648							
Great Crosby	18,285	14	59	105	294	522	178	816
Great Harwood	12,789	67	557	72	89	213	696	302
Haslingden	16,639	36	638	58	83	185	732	268
Haydock	10,350	602	77	85	76	157	764	233
Heywood	25,968	13	625	91	92	178	729	270
Hindley	21,632	436	260	53	57	196	749	253
Horwich	15,680	35	623	87	78	165	745	243
Huyton with Roby	5,199	106	130	158	278	328	394	607
Ince in Makerfield	21,761	332	298	77	60	233	707	293
Irlam	12,901	45	275	341	95	233	661	328
Kearsley	9,737	138	489	122	77	172	749	249
Kirkham	4,031							
Lancaster	43,383	11	191	280	148	364	482	512
Lees	4,738							
Leigh	45,317	274	420	41	72	191	735	263
Leyland	10,571	50	510	210	86	144	770	230
Litherland	15,959	13	90	250	208	440	353	648
Littleborough	12,028	19	608	103	96	175	730	271
Little Crosby	1,097							
Little Hulton	7,874	342	373	54	81	151	769	232
Little Lever	4,944							
Longridge	4,158							
Lytham St. Anne's	25,764	33	64	135	378	404	232	782
Middleton	29,188	19	560	122	92	208	701	300
Milnrow	8,623	53	658	65	82	143	776	225

L A N C A S T E R

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Morecambe and Heysham	24,542	31	66	86	356	467	183	823
Mossley	12,042	21	632	62	89	207	715	296
Nelson	38,304	9	649	62	89	202	720	279
Newton in Makerfield	20,152	100	435	143	101	225	678	326
Norden	4,348							
Ormskirk	14,218	192	61	156	192	408	409	600
Padiham	11,633	57	596	73	87	196	726	283
Poulton le Fylde	3,366							
Preesall	2,043							
Prescot	9,399	52	570	79	107	192	701	299
Prestwich	23,881	14	179	165	149	492	359	641
Radcliffe	24,675	23	517	160	93	205	700	298
Rainford	3,494							
Ramsbottom	14,929	29	608	96	77	189	733	266
Rawtenstall	28,587	38	480	297	72	162	765	234
Rishton	6,633	89	549	123	59	181	761	440
Royton	16,689	14	708	41	76	160	763	236
Skelmersdale	6,177	405	91	235	72	194	731	266
Standish with Langtree	7,261	593	266	80	92	173	739	265
Stretford	56,791	12	276	189	125	398	478	523
Orrell	6,949	291	174	169	109	259	634	368
Oswaldtwistle	14,218	83	591	91	65	168	765	233
Swinton and Pendlebury	32,761	157	347	96	113	294	600	407
Thorton Cleveleys	10,152	99	46	195	309	350	340	659
Tottington	6,532	48	546	88	111	207	682	318
Trawden	2,545							
Turton	11,847	87	548	69	127	173	704	300
Tyldesley Shakerley	14,846	466	270	36	64	165	772	227
Ulverston	9,234	70	178	124	234	389	372	623
Upholllow	5,605	385	85	164	104	258	634	362
Urmston	9,284	29	264	167	159	418	460	547
Walton le Dale	12,720	72	512	117	72	222	701	294
Wardle	4,793							
Waterloo with Seaforth	31,187	9	67	141	205	578	217	783
Westhoughton	16,078	293	378	60	68	188	731	256
Whitefield	9,107	16	388	142	143	310	546	453
Whitworth	8,360	97	661	45	58	136	803	194
Widnes	40,619	85	120	374	128	296	579	424
Withnell	3,040							
Wonsley	14,502	231	518	92	115			379

L E I C E S T E R

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Leicester (including County Borough)	544,861	110	286	231	137	232	627	369
Leicester (Administrative County)	302,692	200	255	193	147	205	648	352
County Borough Leicester	239,169	8	321	281	125	264	610	389
Urban Districts	121,444							
Ashby de la Zouch	5,091	223	36	174	206	352	433	558
Ashby Woulds	3,351							
Coalville	21,880	419	188	99	84	208	706	292
Hinckley	16,030	24	565	134	131	145	720	276
Loughborough	26,945	16	491	109	154	229	616	380
Market Harborough	9,312	24	71	456	170	271	551	441
Melton Mowbray	10,437	38	265	121	210	373	414	583
Oadby	4,724							
Quorndon	2,604							
Shepshed	5,758	160	428	180	89	142	768	231
Thurmaston	3,723							
Wigston Magna	11,389	38	342	225	112	281	605	393

L I N C O L N. (HOLLAND)

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Lincoln Holland	92,330	470	22	79	142	284	571	426
Urban Districts	41,048							
Boston	16,600	85	29	194	193	498	308	691
Holbeach	6,112	578	21	50	133	216	649	349
Long Sutton	2,902							
Spalding	12,595	313	29	92	200	359	434	559
Sutton Bridge.	2,839							

L I N C O L N. (KESTEVEN)

Lincoln Kesteven	110,060	290	93	67	197	328	450	525
Urban Districts	41,572							
Bourne	4,889							
Grantham	19,711	18	175	120	255	444	313	679
Sleaford	7,025	108	36	91	244	516	235	760
Stamford	9,947	38	244	113	225	376	395	601

L I N C O L N (LINDSEY)

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Lincoln Lindsey	422,199	225	138	111	185	348	474	583
Administrative County	263,498	289	130	79	194	308	488	502
County Boroughs	158,701							
Grimsby	92,458	195	54	163	168	410	412	584
Lincoln	66,243	14	299	103	167	409	416	576
Urban Districts	128,636							
Alford	2,227							
Barton upon Humber	6,352	119	274	160	164	276	553	448
Brigg	4,019							
Cleethorpes	28,631	129	61	100	230	490	290	720
Crowle	2,533							
Gainsborough	18,689	13	352	156	154	323	521	477
Horncastle	3,496							
Louth	9,683	68	36	145	285	475	249	760
Mablethorpe and Sutton	3,928							
Market Rasen	2,048							
Roxby cum Risby	548							
Scunthorpe and Frodingham	33,761	52	483	43	141	277	578	418
Skegness	9,122	73	29	50	450	394	152	844
Winterton	1,958							
Woodhall Spa	1,372							

N O R F O L K.

Total population and proportions per 1,000 of total employed in each group and in Production and Services respectively in the county and the individual towns in 1931.

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Norfolk (including County Boroughs)	504,940	226	54	172	211	328	482	539
Norfolk (Administrative County)	321,923	350	36	81	234	294	467	528
County Boroughs	183,007							
Great Yarmouth	56,771	38	90	182	228	456	310	684
Norwich	126,236	15	82	381	156	360	478	516
Urban Districts	61,143							
Cromer	4,176	36	18	57	455	428	111	883
Diss	3,421	122	94	151	222	419	367	641
Downham Market	2,465	98	66	132	249	450	296	699
East Dereham	5,643	104	89	186	216	400	379	616
King's Lynn	20,583	39	60	152	205	546	251	751
New Hunstanton	3,132	45	31	55	453	404	141	857
North Walsham	4,137	121	44	82	358	386	247	744
Sheringham	4,142	71	24	61	437	396	156	833
Swaffham	2,783	172	41	73	241	475	286	716
Thetford	4,098	75	65	155	282	419	295	701
Walsoken	4,058	342	17	188	161	286	547	447
Wells	2,505	181	44	83	262	423	308	685

N O R T H A M P T O N

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Northampton (including County Borough)	309,474	99	53	422	161	260	574	421
Northampton (Administrative County.)	217,133	139	55	395	171	240	589	411
County Borough Northhampton	92,341	11	49	485	142	311	545	453
Urban Districts	102,420							
Brackley	2,181							
Burton Latimer	3,587							
Daventry	3,609							
Desborough	4,407							
Finedon	4,100							
Higham Ferrers	2,930							
Irthlingborough	4,715							
Kettering	31,220	16	55	563	112	250	634	362
Oundle	2,001							
Raunds	3,683							
Rothwell	4,516							
Rushden	14,248	17	17	728	83	157	762	240
Wellingborough	21,223	30	63	479	128	398	572	426

NORTHUMBERLAND

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Northumberland	756,782	243	112	91	184	365	446	549
Northumberland (Administrative County)	408,704	409	67	54	174	290	530	464
County Boroughs	348,078							
Newcastel	283,156	30	174	152	189	459	356	648
Tynemouth	64,922	83	142	91	207	463	316	670
Urban Districts	305,117							
Alnwick	6,883	137	22	186	239	410	345	649
Amble	4,205							
Ashington	29,418	727	2	23	52	195	752	247
Bedlington-shire	27,461	700	7	33	79	188	740	267
Berwick upon Tweed	12,299	90	41	137	186	544	268	730
Blyth	31,680	326	90	45	129	421	461	550
Cramlington	8,238	724	18	21	66	165	763	231
Marsdon	13,086	595	21	47	158	191	663	349
Gosforth	18,044	110	58	83	282	456	251	738
Hexham	8,888	82	37	97	335	453	216	788
Longbenton	14,074	395	47	61	200	302	476	306
Morpeth	7,391	165	76	65	203	476	306	679
Newbiggin by the Sea	6,904	686	8	22	85	228	686	313
Newburn	19,542	611	73	72	106	235	656	341
Prudhoe	9,259	638	14	29	115	202	681	341
Rothbury	1,255							
Seaton Delaval	7,377	637	13	27	137	188	677	325
Seghill	2,582							
Wallsend	44,587	139	389	52	150	272	580	422
Weetslade	7,734	595	20	31	113	242	646	355
Whitley and Monkseaton	24,210	21	107	108	240	512	236	752

N O T T I N G H A M

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Nottingham (including County Borough)	712,731	221	214	139	137	291	574	428
Nottingham (Administrative County)	443,930	331	175	99	145	255	605	400
County Borough Nottingham	286,801	58	270	191	143	320	519	463
Urban Districts	270,495							
Arnold	14,470	168	263	134	188	251	565	439
Beeston	16,017	21	440	100	165	275	561	440
Carlton	22,325	68	211	195	114	431	474	545
East Retford	14,229	65	129	129	243	430	323	673
Eastwood	5,360	470	136	77	111	203	683	314
Hucknall	17,338	417	220	96	72	193	733	275
Huthwaite	5,092	455	277	49	62	159	781	221
Kirby in Ashfield	17,797	550	100	60	61	231	710	292
Mansfield	46,077	328	175	87	132	300	590	432
Mansfield Woodhouse	13,721	505	165	57	93	177	727	270
Newark	18,060	37	285	234	153	291	556	444
Sutton in Ashfield	25,153	361	314	44	100	183	719	283
Warsop	10,749	740	24	19	84	131	783	215
West Bridgford	17,822	11	145	162	167	520	318	687
Worksop	26,285	438	21	86	164	288	545	452

O X F O R D

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Oxford	208,621	130	119	98	295	372	347	667
Oxford (Administrative County)	129,082	207	82	89	312	303	378	615
County Borough Oxford	80,539	12	173	119	270	420	304	690
Urban Districts	36,356							
Banbury	13,953	32	63	215	216	469	310	685
Bicester	3,110							
Chipping Norton	3,499							
Henley on Thames	6,621	26	69	101	404	397	196	801
Thame	3,012							
Wheatley	1,268							
Witney	3,409							
Woodstock	1,484							

S O K E O F PE T E R B O R O U G H.

Soke of Peterborough	51,839	78	137	137	183	465	352	648
Urban District. Peterborough	43,551	28	152	145	181	493	325	674

R U T L A N D

Rutland	17,401	298	41	58	313	294	397	607
Urban District Oakham	3,191							

S H R O P S H I R E

Shropshire	244,156	276	90	72	234	318	438	552
Urban Districts	115,091							
Bishop's Castle	1,352							
Bridgnorth	5,152	53	245	74	277	356	372	633
Church Stretton	1,704							
Dawley	7,359	247	347	110	110	194	704	304
Ellesmere	1,872							
Ludlow	5,642	34	25	100	322	512	159	834
Market Drayton	4,749							
Newport	3,427							
Oakengates	11,190	239	309	119	109	231	667	340
Oswestry	9,754	38	47	89	228	588	174	816
Shrewsbury	32,372	19	74	96	251	562	189	813
Wellington	8,186	32	137	141	225	458	310	683
Wem	2,157							
Wenlock	14,149	178	193	218	187	222	589	419
Whitchurch	6,017	70	104	104	283	436	278	719

S O M E R S E T

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	A
Somerset (including County Borough)	475,142	180	64	168	270	322	412	592
Somerset (Administrative County)	406,327	195	61	166	257	304	433	561
County Borough Bath	68,815	25	75	168	326	404	269	730
Urban Districts	174,788							
Bridgwater	17,139	22	57	348	186	386	427	572
Burnham on Sea	5,120	37	29	99	419	416	165	835
Chard	4,054							
Clevedon	7,029	75	30	104	389	336	269	725
Crewkerne	3,529							
Frome	10,739	34	168	258	205	339	460	544
Glastonbury	4,514							
Highbridge	2,585							
Ilminster	2,232							
Midsomer Norton	7,490	372	30	177	155	266	579	421
Minehead	6,315	40	23	68	448	421	131	869
Portishead	3,909							
Radstock	3,622							
Shepton Mallet	4,108							
Street	4,453							
Taunton	25,178	17	74	206	225	493	297	718
Watchet	1,936							
Wellington	7,132	70	362	114	187	265	546	452
Wells	4,831							
Weston super Mare	28,554	25	28	102	384	455	155	839
Wivelscombe	1,262							
Yeovil	19,077	15	180	324	155	328	519	483

SOUTHAMPTON

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Southampton	1,014,316	61	90	75	274	488	226	762
Southampton (Administrative County)	472,229	116	61	68	290	465	245	755
County Boroughs	542,087							
Bournemouth	116,797	19	35	85	422	433	139	855
Portsmouth	249,283	3	140	105	196	553	248	749
Southampton	176,007	12	140	95	233	516	247	749
Urban Districts	213,725							
Aldershot	34,280	4	19	56	108	801	79	909
Alton	6,188	52	54	179	262	444	285	706
Andover	9,692	73	55	81	318	470	209	788
Basingstoke	13,865	42	224	148	301	380	414	581
Christchurch	9,190	61	36	90	411	394	187	805
Eastleigh and Bishopstoke	18,335	10	412	41	125	411	463	536
Fareham	11,595	82	46	98	291	480	226	771
Farnborough	16,356	6	14	28	149	796	48	945
Fleet	4,526							
Gosport	38,338	19	73	52	211	644	144	855
Havant	4,350							
Lymington	5,177	30	125	74	372	394	229	766
Milton	5,293	113	28	50	446	352	191	798
Petersfield	4,387							
Romsey	4,862							
Warblington	4,321							
Winchester	22,970	22	33	87	336	528	142	864

S T A F F O R D S H I R E

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Stafford (including County Borough	1,431,359	136	267	228	128	242	631	370
Staffordshire (Administrative County)	703,254	201	294	139	140	222	634	362
County Boroughs	728,105							
Burton on Trent	49,486	25	89	390	153	216	504	469
Semthwick	84,406	4	479	148	113	255	630	368
Stoke on Trent	276,639	149	47	489	89	224	685	313
Walsall	103,059	68	289	227	135	281	584	416
West Bromwich	81,303	30	471	158	110	227	659	337
Wolverhampton	133,212	10	405	109	154	323	524	477
Urban Districts	490,632							
Amblecote	3,099							
Audley	13,621	421	62	174	116	227	657	343
Biddulph	8,346	428	222	91	86	178	741	264
Bilston	31,255	23	594	79	101	206	696	307
Brierley Hill	14,347	32	344	316	100	211	692	311
Brownhills	18,368	552	66	110	118	159	728	277
Cannock	34,585	607	30	76	112	169	713	281
Cossley	25,137	45	597	92	102	162	734	264
Darlaston	19,736	4	753	39	68	124	796	192
Kidsgrove	9,938	364	101	217	81	238	682	319
Leek	18,567	8	647	53	107	186	708	293
Lichfield	8,500	46	61	114	324	430	241	751
Newcastle under Lyme	23,246	105	79	294	195	345	478	540
Quarry Bank	8,100	54	599	128	81	145	781	226
Rowley Regis	41,235	49	553	129	100	104	731	264
Rugeley	5,262	398	44	148	172	239	590	411
Sedgley	19,262	167	262	210	148	208	639	356
Short Heath	5,047	192	502	49	97	157	743	254
Stafford	29,485	44	225	254	142	340	523	482
Stone	5,952	33	42	383	205	334	458	539
Tamworth	7,509	245	85	220	149	301	550	450
Tettenhall	5,769	37	169	95	406	292	301	698
Tipton	35,814	13	540	137	93	192	715	285
Uttoxeter	5,909	27	260	147	205	361	434	566
Wednesbury	31,531	3	605	80	102	226	688	328
Wednesfield	9,330	63	508	78	118	230	649	348
Willenhall	21,150	15	689	38	84	173	742	257
Wolstanton	30,525	174	74	368	125	256	616	381

S U F F O L K (EAST)

Total population and proportions per 1,000 of total employed in each group and in Production and Services respectively in the county and the individual towns in 1951.

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Suffolk(East) (including County Boroughs)	294,977	193	87	128	252	352	466	590
Suffolk(East) (Administrative County)	207,475	272	56	84	255	327	412	582
County Borough Ipswich	87,502	16	155	215	302	408	566	610
Urban Districts								
Aldeburgh	2,479	49	36	48	490	371	132	861
Beccles	6,545	47	95	261	230	368	403	593
Bungay	3,100	78	21	325	330	344	424	574
Eye	1,733	226	29	85	247	410	340	657
Felixstowe	12,667	40	25	68	400	519	133	919
Halesworth	2,624	121	38	121	290	426	280	716
Leiston cum Sizewell	4,184	95	273	45	230	250	413	580
Lowestoft	41,769	120	100	102	213	445	340	658
Saxmundham	1,250	75	40	109	317	460	224	777
Southwold	2,753	66	71	113	371	378	280	743
Stowmarket	4,257	38	108	220	254	383	366	637
Woodbridge	4,734	66	45	84	338	462	195	800

S U F F O L K (WEST)

Total population and proportions per 1,000 of total employed in each group and in Production and Services respectively in the county and the individual towns in 1931.

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Suffolk(West)	1,190,678	276	67	59	288	305	402	593
Urban Districts								
Bury St. Edmunds	16,708	25	88	128	254	472	265	716
Glemsford	1,261	220	336	77	146	214	633	360
Hadleigh	2,051	198	146	104	295	342	448	547
Haverhill	5,888	61	143	314	166	511	518	477
Newmarket	9,752	52	34	71	308	527	157	835
Sudbury	7,007	48	216	152	210	368	416	578

S U R R E Y

	Towns,	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
	Surrey	1,180,878	33	70	116	323	457	219	780
	Surrey (Administrative County)	947,486	38	68	111	335	443	217	778
	County Borough								
G.L.	Croydon	233,032							
	Urban Districts	765,000							
G.L.	Barnes	42,440							
G.L.	Beddington and Wallington	26,251							
G.L.	Carshalton	28,763							
G.L.	Caterham and Warlingham	19,512							
	Chertsey	17,133	52	174	94	327	347	320	674
G.L.	Coulsdon and Purley	37,702							
	Dorking	10,111	35	45	90	407	421	170	829
G.L.	East and West Molesey	8,464							
	Egham	15,916	40	75	142	359	383	257	742
G.L.	Epsom	27,089							
G.L.	Esher and the Dittons	17,076							
	Farnham	18,397	63	55	82	404	394	200	798
	Frimley and Camberley	16,532	17	19	42	323	598	78	921
	Godalming	10,401	19	76	93	388	423	188	811
	Guildford	30,754	17	90	131	292	470	238	762
G.L.	Ham	2,206							
	Haslemere	4,339							
G.L.	Kingston on Thames	39,055							
	Leatherhead	6,916	39	85	46	436	389	170	825
G.L.	Merton and Morden	41,227							
G.L.	Mitcham	56,859							
	Reigate	30,825	36	63	97	373	424	196	797
G.L.	Richmond	37,797							
G.L.	Surbiton	29,401							
G.L.	Sutton and Cheam	46,500							
G.L.	The Maldens and Coombe	23,405							
	Walton upon Thames	17,953	46	92	105	417	337	243	754
	Weybridge	7,364	18	136	65	418	361	219	779

S U R R E Y (cont.)

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Wimbledon	59,524							
Windlesham	5,257	123	20	42	526	281	188	807
Woking	29,931	57	41	101	376	423	199	799

S U S S E X E A S T

Total population and proportions per 1,000 of total employed in each group and in Production and Services respectively in the county and the individual towns in 1931.

Towns	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Sussex East (including County Boroughs)	546,864	77	46	72	385	393	205	778
Sussex East (Administrative County)	276,795	133	35	67	401	360	233	761
County Boroughs	270,069							
Brighton	147,427	15	85	103	330	461	203	791
Eastbourne	57,435	20	32	73	453	438	125	871
Hastings	65,207	24	25	81	379	490	130	869
Urban Districts	142,266							
Battle	3,491	221	36	121	276	338	378	614
Bexhill	21,229	38	25	60	477	385	123	862
Burgess Hill	5,974	62	28	116	423	364	206	787
Cuckfield	2,114	82	19	51	500	344	152	844
East Grinstead	7,902	60	30	54	423	428	144	851
Haywards Heath	5,391	40	46	63	358	482	149	840
Hove	54,995	13	45	94	409	440	151	849
Lewes	10,794	42	84	98	288	488	224	776
Newhaven	6,789	41	56	61	170	656	158	826
Portslade by Sea	9,527	49	61	14	386	366	224	752
Rye	3,947	45	42	70	397	434	157	831
Seaford	6,570	36	19	46	422	477	101	899
Uckfield	3,555	56	21	112	403	411	189	814

S U S S E X W E S T

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Sussex West (Administrative County)	222,998	147	36	74	385	358	257	743
Urban Districts	2,							
Arundel	2,490	44	43	152	364	396	239	760
Bognor Regis	13,521	22	23	69	444	434	114	878
Chichester	13,912	45	25	131	270	526	201	796
Horsham	13,580	35	61	116	315	463	212	778
Littlehampton	10,178	51	41	73	421	413	165	833
Shoreham by Sea	8,757	78	72	92	314	448	242	762
Southwick	6,138	53	64	101	363	416	218	779
Worthing	46,324	73	31	65	404	425	169	829

WARWICKSHIRE

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Warwickshire (including County Boroughs)	1,535,007	52	363	147	155	287	562	442
Warwickshire (Administrative County)	365,321	199	208	104	210	276	511	486
County Boroughs	1,169,686							
Birmingham	1,002,603	5	401	174	140	301	580	441
Coventry	167,083	13	599	53	121	215	665	336
Urban Districts	177,172							
Bedworth	12,055	305	389	106	71	125	800	196
Bulkington	2,747							
Kenilworth	7,592	77	292	90	290	247	459	537
Nuneaton	46,291	252	250	163	105	225	665	330
Royal Leamington Spa	29,669	16	165	95	310	412	276	722
Rugby	23,826	10	428	58	163	343	493	506
Stratford upon Avon	11,605	60	88	127	326	400	275	726
Sutton Coldfield	29,928	38	188	126	299	365	352	664
Warwick	13,459	26	204	125	267	370	355	637

WESTMORELAND

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Westmoreland	65,408	229	61	128	299	280	418	579
Urban Districts	28,828							
Ambleside	2,343							
Appleby	1,618							
Grasmere	988							
Kendal	15,577	23	139	276	210	354	438	564
Kirkby Lonsdale	1,378							
Shap	1,228							
Windermere	5,702	50	59	82	458	348	191	806

WIGHT, ISLE OF

Isle of Wight	88,454	97	81	71	349	407	249	756
Urban Districts	58,472							
Cowes	10,171	13	305	55	274	349	373	623
East Cowes	4,604	21	439	49	200	290	509	490
Newport	11,322	39	54	131	247	535	224	772
Ryde	10,520	25	24	90	369	491	139	860
St. Helens	5,501	52	43	57	416	419	152	835
Sandown	6,168	45	16	60	465	417	121	882
Shanklin	5,072	27	22	61	515	373	110	888
Ventnor	5,114	26	18	72	464	416	116	880

W I L T S H I R E

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Wiltshire	303,373	155	159	113	226	344	427	570
Urban Districts	144,743							
Bradford on Avon	4,735							
Calne	3,463							
Chippenham	8,493	23	285	133	229	328	441	557
Devizes	6,058	31	22	153	310	478	206	788
Malmesbury	2,334							
Marlborough	3,492							
Melksham	3,881							
Salisbury	26,460	19	34	86	289	564	139	853
Swindon	62,401	8	478	91	127	287	577	414
Trowbridge	12,011	22	211	223	155	388	456	543
Warminster	5,176	93	74	183	281	368	350	649
Westbury	4,044							
Wilton	2,195							

W O R C E S T E R S H I R E

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Worcestershire (including County Boroughs	420,056	111	299	137	182	272	547	454
Worcester (Administrative County)	309,927	137	305	114	190	249	556	439
County Boroughs	110,129							
Dudley	59,583	47	382	183	127	262	612	389
Worcester	50,546	14	168	227	185	409	409	594
Urban Districts	205,628							
Bewdley	2,868							
Bromsgrove	9,520	55	268	148	215	316	471	531
Droitwich	4,553							
Evesham	8,799	236	31	137	223	372	404	595
Halesowen	31,059	34	525	122	124	196	681	320
Kidderminster	28,917	15	587	66	126	225	638	351
Lye and Wollescote	12 237	49	495	175	88	192	719	280
Malvern	15,634	48	31	86	406	429	165	835
North Bromsgrove	10,981	115	350	68	229	227	533	456
Oldbury	35,926	10	472	207	89	224	689	313
Redditch	19,281	19	521	160	117	177	700	294
Stourbridge	19,904	22	217	158	220	385	397	605
Stourport	5,949	30	446	175	165	183	651	348

YORKSHIRE EAST RIDING

Total population and proportions per 1,000 of total employed in each group and in Production and Services respectively in the county and the individual towns in 1951.

Yorkshire, East Riding (including County Boroughs)	482,936	135	80	155	193	428	360	621
East Riding (Administrative County)	169,392	282	45	93	250	326	420	576
County Borough Kingston upon Hull	313,544	54	99	197	163	483	350	646
Urban Districts	72,750							
Beverley	14,612	38	112	199	231	421	349	652
Bridlington	19,705	49	35	91	291	433	175	824
Cottingham	6,179	151	48	86	258	458	285	716
Filey	3,733							
Great Driffield	5,915	85	83	152	245	425	320	670
Hedon	1,501							
Hessle	6,429	68	78	81	319	455	227	774
Hornsea	4,450							
Norton	3,935							
Pocklington	2,640							
Withernsea	4,251							

Y O R K S H I R E (NORTH RIDING)

Towns.	Popn.	(1)	(2)	(3)	(4)	(5)	P	S
Yorkshire North Riding	469,375	165	164	66	215	374	395	589
Yorkshire North Riding (Administrative County)	331,101	217	114	72	237	359	403	596
County Borough								
Middlesborough	138,274	19	305	113	151	412	437	563
Urban Districts	182,279							
Eston	31,341	49	540	58	103	247	647	350
Guisborough	6,306	221	128	66	212	372	415	584
Hinderwell	2,146							
Kirklington cum Upsland	249							
Loftus	7,631	329	306	33	105	224	668	329
Malton	4,419							
Masham	1,995							
Northallerton	4,786							
Pickering	3,668							
Redcar	20,160	30	309	66	211	385	405	596
Richmond	4,769							
Saltburn by the Sea	3,911							
Scalby	2,771							
Scarborough	41,788	31	39	106	381	443	176	824
Skelton and Brotton	13,655	478	160	24	139	198	662	337
Thornaby on Tees	21,233	17	358	157	151	319	532	470
Whitby	11,451	50	23	75	377	472	148	849

YORKSHIRE, WEST RIDING.

Total population and proportions per 1,000 of total employed in each group and in Production and Services respectively in the county and the individual towns in 1931.

		(1)	(2)	(3)	(4)	(5)	P	S
Yorkshire, West Riding (including County Boroughs)	3,437,368	154	296	140	131	286	589	417
Yorkshire, West Riding (Administrative County)	1,530,405							
County Boroughs	1,822,150							
Barnsley	71,522	340	81	139	125	311	560	436
Bradford	298,041	12	443	83	151	332	538	483
Dewsbury	54,302	99	390	86	135	287	575	422
Doncaster	63,316	92	246	79	172	409	417	581
Halifax	98,115	20	453	146	117	261	619	378
Huddersfield	113,475	17	447	146	127	274	610	401
Leeds	482,809	23	185	337	142	321	545	463
Rotherham	69,691	161	335	60	136	301	556	437
Sheffield	511,757	53	380	109	131	324	542	455
Wakefield	59,122	130	255	98	128	384	483	512
York	84,813	11	79	271	184	455	361	639
Urban Districts	1,090,432							
Adwick le Street	20,257	758	21	29	60	136	808	196
Altofts	4,981							
Ardsley (East and West)	9,216	234	288	91	65	326	603	391
Baildon	7,792	26	432	86	142	312	544	454
Barkisland	1,552							
Barnoldswick	11,914	26	739	35	64	138	800	202
Batley	34,537	59	504	89	95	256	652	351
Bentley with Arksey	16,458	534	82	64	100	218	680	318
Bingley	20,553	46	491	105	123	229	642	352
Birkenshaw	2,816							
Birstall	7,204	94	514	70	97	224	678	321
Bolton upon Dearne	14,245	765	5	17	68	145	787	213
Brighouse	19,756	56	500	122	115	205	678	320
Burley in Wharfedale	3,961							
Calverly	3,655							

YORKSHIRE, WEST RIDING (2)

		(1)	(2)	(3)	(4)	(5)	P	S
Castleford	21,784	454	21	187	94	241	662	335
Clayton West	1,874							
Conisborough	18,174	680	11	112	62	136	803	198
Cudworth	9,377	642	8	26	80	247	676	327
Darfield	5,260	719	12	23	92	169	754	252
Darton	12,698	663	87	43	76	152	793	208
Denby and Cumberworth	3,396							
Denholme	2,662							
Dodworth	4,245							
Drighlington	4,066							
Earby	5,522	46	689	39	74	155	774	229
Elland	10,326	24	557	133	97	180	714	277
Emley	1,637							
Farsley	6,158	22	578	93	88	221	693	309
Featherstone	14,955	687	16	54	64	179	757	243
Flockton	1,471							
Garforth	3,774							
Gildersome	3,044							
Golcar	9,818	20	707	50	68	158	777	226
Goole	20,239	42	46	89	146	675	177	821
Greasbrough	3,599							
Greetland	4,299							
Guiseley	5,607	39	520	70	107	269	629	369
Gunthwaite and Ingbirchworth	338							
Harrogate	39,770	22	40	97	405	437	159	842
Haworth	5,911	48	646	77	75	154	771	229
Hebden Bridge	6,312	12	247	476	103	156	755	259
Heckmondwike	8,991	24	478	126	95	270	630	365
Hemsworth	13,002	694	12	21	89	177	727	266
Hipperholme	5,383	70	392	140	148	250	602	398
Holme	568							
Holmfirth	10,407	59	590	57	119	173	706	292
Honley	4,611							
Horbury	7,791	150	340	117	119	266	607	385
Horsforth	11,776	39	290	159	183	326	488	509
Hoyland Nether	15,214	691	28	27	92	164	746	256
Hoyland Swaine	792							
Hunsworth	1,319							
Ilkley	9,736	28	97	73	380	421	198	801
Keighley	40,441	12	581	81	103	235	674	336
Kirkburton	3,184							
Kirkheaton	2,610							
Knaresborough	5,942	74	49	87	368	437	210	805
Knottingley	6,839	87	31	486	105	288	604	395
Lepton	3,323							
Linthwaite	9,688	24	697	76	70	135	797	205
Luddenden Foot	2,881							

YORKSHIRE, WEST RIDING (2)

		(1)	(2)	(3)	(4)	(5)	P	S
Maltby	10,010	755	14	13	93	123	782	216
Marsden	5,723	15	773	26	61	123	814	184
Meltham	5,051	67	642	38	93	149	747	242
Methley	4,607							
Mexborough	15,848	438	47	79	103	329	564	432
Midgley	1,882							
Mirfield	12,114	49	417	111	120	300	577	420
Morley	23,369	80	532	102	95	188	714	285
Mytholmroyd	4,468							
New Mill	4,538							
Normanton	15,684	564	35	77	63	261	676	324
Oakworth	3,983							
Ossett	14,838	197	295	107	104	291	599	395
Otley	11,034	22	379	190	136	270	591	406
Oxenhope	2,277							
Penistone	3,264							
Pontefract	19,057	345	15	183	117	334	543	451
Pudsey	14,761	27	522	117	107	238	660	345
Queensbury	5,761	64	566	101	94	163	731	257
Rawdon	4,574							
Rawmarsh	18,572	502	205	34	89	175	741	264
Ripon	8,591	50	47	165	295	439	262	734
Rishworth	838							
Rothwell	15,640	317	132	284	77	248	673	325
Royston	7,166	748	5	9	7 71	146	762	217
Saddleworth	12,574	46	570	72	97	213	688	310
Scammonden	394							
Selby	10,004	55	106	260	175	402	421	577
Shelf	2,600							
Shelley	1,566							
Sheptley	1,668							
Shipley	30,242	12	501	78	128	278	591	406
Silsden	4,889							
Skelmanthorpe	3,712							
Skipton	12,461	30	419	67	130	348	516	478
Slaithwaite	5,183	37	709	47	48	145	793	193
South Crosland	2,985							
Southowram	2,570							
Sowerby	14,680	25	548	102	93	235	675	328
Soyland	3,059							
Spenborough	30,963	38	540	137	93	192	715	285
Springhead	4,834							
Stainland	4,246							
Stanley	14,565	411	172	87	82	248	670	330
Stocksbridge	9,255	210	495	48	103	147	751	244
Swinton	13,821	503	91	70	100	209	664	309
Thurnscoe	10,548	794	5	11	58	134	810	192
Thurlstone	2,640							
Thurstonland and Farnley Tyas	3,981							

YORKSHIRE, WEST RIDING

		(1)	(2)	(3)	(4)	(5)	P	S
Tickhill	2,297							
Todmorden	22,222	29	629	90	69	179	748	248
Whitley Upper	932							
Wath upon Dearne	13,655	612	10	54	100	229	676	329
Whitwood	6,197	568	28	187	71	135	773	206
Wombwell	18,367	681	19	44	86	177	744	263
Worsborough	12,399	605	39	68	83	210	712	293
Yeadon	7,672	20	621	57	116	177	698	293

WALES

		(1)	(2)	(3)	(4)	(5)	F	S
Anglesey (Administrative County)	49,029	330	25	48	234	364	403	598
Urban Districts	18,429							
Amlwch								
Beaumaris								
Holyhead	10,400	25	54	41	193	682	120	875
Llangefni								
Menai Bridge								
Brecknock (Administrative County)	57,775	448	31	42	188	290	521	478
Urban Districts	16,493							
Brecknock	5,332	35	24	85	260	591	144	851
Brynmawr	7,247	428	23	57	112	379	508	491
Builth Wells								
Hay								
Llanwrtyd								
Caernarvon (Administrative County)	120,829	319	28	43	250	351	390	601
Urban Districts	63,488							
Bangor	10,960	53	30	72	260	579	155	839
Bethesda								
Bettws y Coed								
Caernarvon	8,469	54	24	102	250	573	180	823
Conway	8,772	73	60	73	282	508	206	790
Criccieth								
Llandudno	13,679	25	29	73	466	409	127	875
Llanfairfechan								
Penmaenmawr								
Portmadoc								
Pwellheli								
Cardigan (Administrative County	55,184	376	24	68	218	308	468	526
Urban Districts	16,792							
Aberayon								
Aberystwyth	9,473	22	24	92	360	502	138	862
Cardigan								
Lampeter								
New Quay								

		(1)	(2)	(3)	(4)	(5)	P	S
Carmarthen (Administrative County)	179,100	391	168	55	120	263	614	383
Urban Districts	74,650							
Ammanford	7,164	449	60	50	104	330	559	434
Burry Port	5,755	272	150	63	102	394	485	496
Carmarthen	10,310	77	51	82	235	549	210	784
Cwmamman	5,217	611	46	50	76	219	707	295
Kidwelly								
Llandilo								
Llandovery								
Llanelly	38,416	17	454	663	115	348	554	463
Newcastle Emlyn								
Denbigh (Administrative County)	157,648	356	32	85	223	303	471	526
Urban Distiots	57,575							
Abergale and Pensarn								
Colwyn Bay	20,886	69	28	680	4400	116	165	830
Denbigh	7,249	153	24	69	2864	509	226	773
Llangollen								
Llansilil								
Ruthin								
St. Asaph								
Uwchaled								
Wrexham	18,569	155	27	122	187	497	304	684
Flint (Administrative County)	112,889	204	185	80	208	323	469	531
Urban Districts	47,092							
Buckley	6,899	239	155	230	133	246	624	379
Connah's Bay	5,980	68	461	72	113	284	601	397
Flint	7,655	42	624	64	99	170	730	269
Prestatyn								
Holywell								
Mold	5,137	90	193	84	198	441	367	639
Rhyl	13,485	19	35	74	373	493	128	866
Glamorgan (Administrative County with County Boroughs)	1,225,717	309	101	70	139	398	480	537
Administrative County	776,223	454	92	43	112	304	589	416

W A L E S (3)

		(1)	(2)	(3)	(4)	(5)	P	S
Glamorgan (including County Boroughs)	1,225,717	309	101	70	139	398	480	537
Glamorgan (Administrative County)	766,223	454	92	43	112	304	589	416
County Boroughs								
Cardiff	223,589	21	85	146	187	554	252	741
Merthyr Tydfil	71,108	461	48	47	113	332	556	445
Swansea	164,797	68	184	89	174	478	341	652
Urban Districts	585,508							
Aberdare	48,746	598	13	35	86	270	646	256
Barry	38,891	34	91	72	159	635	197	794
Bridgend	10,029	82	54	80	225	557	216	782
Caerphilly	35,768	495	61	37	119	290	593	409
Cowbridge	1,018	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Gelligaer	41,043	692	9	21	74	197	722	271
Glyncorwg	10,203	782	4	16	49	149	802	198
Llwchwr	26,626	237	428	34	87	198	699	285
Maestag	25,570	600	8	35	88	268	643	356
Mountain Ash	38,386	687	7	18	73	215	712	288
Neath	33,340	100	307	59	138	405	465	543
Ogmore and Garw	26,981	757	2	17	60	166	776	226
Penarth	17,719	50	46	106	266	520	202	786
Pontypridd	42,717	367	44	61	131	393	472	524
Porthcawl	6,447	107	39	68	346	440	214	786
Port Talbot	40,678	124	378	35	100	364	537	464
Rhondda	141,346	657	7	25	71	237	689	308

WALES

		(1)	(2)	(3)	(4)	(5)	P	S
Merioneth (Administrative County)	43,201	417	12	47	238	279	476	517
Urban Districts	19,703							
Bala	1,395							
Barmouth	2,489							
Dolgelley	2,260							
Ffestiniog	9,078	594	5	45	116	239	644	355
Mallwyd	679							
Towyn	3,802							
Monmouth (including County Boroughs)	434,958	371	115	50	129	330	536	459
Monmouth (Administrative County)	345,755	476	92	39	114	277	607	391
County Borough								
Newport	89,203	16	198	96	186	511	310	697
Urban Districts	291,163							
Abercarn	20,551	662	84	19	53	171	765	224
Abergavenny	8,608	45	18	96	244	590	159	834
Abersychan	25,748	552	103	35	89	218	690	307
Abertillery	31,803	646	44	24	71	219	714	290
Bedwas and Machen	9,192	399	112	42	129	315	553	444
Bedwellty	30,074	701	5	22	67	205	728	273
Blaenavon	11,076	657	37	21	94	188	715	282
Caerleon	2,327							
Chepstow	4,302							
Ebbw Vale	31,686	603	66	33	73	227	702	300
Llanfrechfa Upper	4,482							
Llantarnam	7,283	87	404	129	117	260	620	377
Monmouth	4,751							
Mynyddislwyn	16,204	737	6	21	70	167	764	137
Nantyglo and Blaina	13,189	650	5	35	72	238	690	316
Panteg	11,499	115	322	36	95	430	473	525
Pontypool	6,790	307	176	58	145	313	541	458
Rhymney	10,506	684	4	51	53	206	739	259
Risca	16,605	397	178	44	93	292	619	385
Tredegar	23,192	579	77	29	72	242	685	314
Usk	1,315							

WALES

		(1)	(2)	(3)	(4)	(5)	P	S
Montgomery (Administrative County)	48,473	437	30	58	197	277	525	474
Urban Districts	17,408							
Llanfyllin	1,449							
Llanidloes	2,356							
Machynlleth	1,892							
Newtown and Llanllwchaiarn	5,154	105	83	148	185	476	336	661
Welshpool	5,639	225	24	88	263	398	337	661
Pembroke (Administrative County)	87,206	368	37	55	199	336	460	535
Urban Districts	40,785							
Fishguard	2,926							
Goodwick	2,314							
Haverfordwest	6,121	47	50	102	258	536	199	794
Milford Haven	10,104	456	51	35	133	320	542	453
Narbeth	1,046							
Neyland	2,157							
Pembroke	12,009	61	73	63	220	585	197	805
Tenby	4,108							
Radnor (Administrative County)	21,323	420	16	35	260	262	471	522
Urban Districts	5,863							
Knighton	1,836							
Llandrindod	2,925							
Presteign	1,102							

TABLE 12

SCOTLAND

Proportion per 1000 of the total employed and unemployed associated with each group, and with Production and Services respectively in Scotland and the Twenty-four Large Burghs in 1931.

	(1)	(2)	(3)	(4)	(5)	P	S	Total
Scotland:	155	195	136	153	346	486	499	985
Twenty-four Large Burghs	31	243	166	146	395	440	541	981
Towns:								
Glasgow	15	233	189	139	411 9	437	550	987
Edinburgh	31	73	205	193	475 5	309	668	977
Dundee	10	484	101	110	286	595	396	991
Aberdeen	60	117	169	156	474 6	346	630	976
Airdrie	125	309	103	386	324	537	410	947
Arbroath	35	357	110	132	355	502	467	969
Ayr	55	146	110	205	476 4	311	681	992
Clydebank	4	616	53	79	228	673	307	980
Coatbridge	95	417	74	123	235	586	358	944
Dumbarton	12	532	32	113	279	576	392	968
Dunfermline	114	181	106	151	435 8	401	586	987
Dumfries	55	217	86	197	449 7	338	646	994
Falkirk	24	424	123	129	302	571	431	1002
Greenock	7	439	92	122	325	538	457	995
Hamilton	304	108	71	121	384 10	483	505	988
Inverness	24	65	103	229	545 (1)	192	774	966
Kilmarnock	47	316	152	132	333	515	465	975
Kirkaldy	115	153	287	130	304	555	434	989
Motherwell	151	372	61	114	284	584	398	988
Paisley	10	464	135	109	270	609	379	988
Perth	22	79	126	279	483 (3)	217	762	989
Port Glasgow	4	716	27	65	180	747	245	992
Rutherglen	25	262	170	146	383 (11)	457	529	986
Stirling	141	74	100	189	493 (2)	315	682	9997

Table 13.

Urban Districts with 5,000 to 50,000 inhabitants arranged according to the relative importance of the Regional function.

(1) Population
(2) Number of people employed in "Regional Services".
(3) Ratio of (2) to total population, expressed as the number so employed per 1,000 inhabitants.
(4) Number of men employed in productive activities.
(5) Ratio of (4) to total population expressed as the number so employed per 1,000 inhabitants.
(6) Number of unemployed men expressed as a percentage of the number of men in employment.

Group 1.

Town in which the ratio of people employed in "Regional Services" is more than 15% below the standard.

	(1)	(2)	(3)	(4)	(5)	(6)
Maltby	10,010	417	42	2,651	265	9.2
Glyncorwg	10,203	442	43	2,373	232	29.0
Thurnscoe	10,548	474	45	2,840	268	9.6

Group 2.

Towns in which the ratio of people employed in "Regional Services" is between 5% and 15% below the standard. Average deficiency 10%.

Warsop	10,749	532	49	3,064	285	4.5
Conisborough	18,174	880	49	4,992	275	9.3
Darton	12,698	629	49	3,349	264	13.1
Darlaston	19,736	971	49	4,432	225	24.7
Adwick le Street	20,257	1,032	51	5,874	290	6.0
Bolton upon Dearne	14,245	730	51	3,911	274	9.5

Group 2 (cont.)

Bedworth	12,055	641	53	2,946	244	X10.8
Whitwood	6,197	325	53	1,631	263	11.7
Cramlington	8,238	431	53	1,947	236	23.0
Washington	16,989	492	54	4,235	249	13.6
Stockbridge	9,255	322	55	2,470	266	9.1
Mynyddislwyn	16,204	900	55	4,100	253	15.2
Willington	8,964	492	55	2,294	255	15.4
Ogmore and Garw	26,981	1,481	55	6,894	255	20.1
Bolsover	11,811	655	55	2,590	219	32.5
Royston	7,166	397	56	2,144	300	4.5
Slaithwaite	5,183	288	56	1,299	251	7.9
Hetton	17,665	984	56	4,254	240	13.6
Hebburn	24,123	1,381	56	2,995	124	92.0
Hoyland Nether	15,214	866	57	3,899	255	16.8
Billingham	17,972	655	57	3,972	221	18.6
Darfield	5,260	308	58	1,431	273	10.6
Cwmamman	5,217	303	58	908	174	60.1
Leadgate	6,395	374	59	1,658	259	13.0
Hemsworth	13,002	769	59	3,092	237	17.2
Quarry Bank	8,100	474	59	1,752	216	22.0
Blaenavon	11,076	657	59	2,469	223	32.5
Aspull	7,193	421	59	1,445	201	34.3
Abercarn	20,551	1,240	60	5,497	268	13.0
Haydock	10,350	628	61	2,642	255	12.7
Coseley	25,137	1,536	61	5,608	224	22.4
Short Heath	5,047	308	61	1,014	200	22.6
Tanfield	9,236	564	61	1,910	206	30.7
Brandon and Byshottles	17,116	1,042	61	3,315	194	33.3

Group 3.

Towns in which the Ratio of people employed in "Regional Services" is within 5% of the standard.

Brownhills	18,368	1,156	62	4,720	264	8.2
Clay Cross	8,497	531	62	2,130	252	11.0
Bedwellty	30,074	1,866	62	6,568	219	24.5
Skelton and Brotton	13,655	854	62	2,812	206	26.5
Ruthwaite	5,092	313	62	1,103	217	27.5
Flint	7,655	472	62	1,406	183	29.2
Rhymney	10,506	656	62	2,321	221	30.0
Abram	6,660	416	63	1,810	270	13.4
Nantyglo and Blaina	13,189	826	63	2,365	179	46.3
Wombwell	18,367	1,170	64	4,766	260	14.0
Golborne	7,321	473	64	1,674	229	17.2
Marsden	5,723	373	65	1,458	256	9.7
Earsdon	13,086	855	65	2,820	216	20.5
Featherstone	14,958	996	66	3,939	262	13.9
Gelligaer	41,043	2,685	66	9,513	232	20.3
Ebbw Vale	31,686	2,027	66	6,238	197	42.6
Maesteg	25,570	1,695	66	4,022	164	61.9
Rawmarsh	18,572	1,238	67	5,108	275	8.6
Ryton	14,204	954	67	3,486	245	11.0
Linthwaite	9,688	648	67	2,329	242	11.8
Ashington	29,418	1,957	67	7,413	252	14.2
Bedwas and Machen	9,192	617	67	1,041	114	97.0
Cannock	34,585	2,340	68	9,483	275	5.5
Bedlington	27,461	1,871	68	7,187	261	10.0
Seaton Delaval	7,377	503	68	1,743	236	15.9
Dawley	7,559	496	68	1,684	230	21.6
Barnoldswick	11,914	806	68	2,517	211	26.7
Shepshed	5,758	392	69	1,342	234	8.8
Prudhoe	9,259	640	69	2,180	231	11.0
Rowley Regis	41,235	2,845	69	8,676	211	17.2
Mountain Ash	38,386	2,655	69	8,702	227	21.9
Willenhall	21,150	1,462	69	4,444	209	22.2
Crook	11,690	799	69	2,392	203	28.0

Whitworth	8,360	590	70	1,913	228	14.5
Mansfield Woodhouse	13,721	961	70	3,231	235	14.8
Biddulph	8,346	588	70	1,626	194	24.0
Clayton Moors	7,909	557	70	1,586	201	28.5
Abersychan	25,748	1,795	70	5,604	217	29.5
Swadlincote	20,308	1,435	71	5,216	256	9.7
Crompton	14,764	1,049	71	3,429	232	17.5
Abertillery	31,803	2,271	71	7,282	229	23.5
Annfield Plain	15,931	1,131	71	3,201	201	27.7
Heanor	22,381	1,611	72	5,439	243	9.0
Milnrow	8,623	625	72	1,845	214	18.6
Chadderton	27,455	1,991	72	5,735	211	27.8
Skelmersdale	6,177	447	72	1,238	200	30.0
Leyland	10,571	768	73	2,702	255	5.6
Meltham	5,051	367	73	1,097	217	8.0
Horwich	15,686	1,144	73	3,492	222	14.0
Llwchwr	26,595	1,952	73	6,297	236	1616
Ashton in Makerfield	20,546	1,505	73	4,462	216	22.5
Barby	5,522	401	73	1,139	206	22.9
Blaydon	32,263	2,348	73	6,699	208	25.7
Audley	13,262	998	73	2,381	179	42.0
Ilkeston	32,813	2,441	74	6,543	200	11.2
Little Hulton	7,874	581	74	1,894	240	12.1
Tyldesley with Shakerley	14,846	1,120	75	3,738	251	9.4
Eston	31,343	2,331	75	5,886	188	36.0
Great Harwood	12,789	951	75	1,705	133	64.0
Swinton	13,821	1,051	76	3,261	236	11.0
Newbiggin by the Sea	6,904	522	76	1,546	223	14.6
Worsborough	12,399	937	76	2,903	234	16.2
Tredegar	23,192	1,770	76	4,961	214	26.1
Wallsend	44,587	3,410	76	6,274	140	65.0
Hinckley	16,030	1,229	77	3,233	202	9.3
Rushden	14,248	1,103	77	3,428	241	1055
Bacup	20,590	1,595	77	4,684	227	12.4
Sutton in Ashfield	25,153	1,926	77	5,376	213	16.6
Oswaldtwistle	14,218	1,093	77	2,901	205	23.0
Mossley	12,042	933	77	1,876	156	49.0

Group 3. (Cont.)

Ffestiniog	9,078	708	78	2,113	232	10.0
Golcar	9,812	769	78	2,298	235	11.0
Haworth	5,911	457	78	1,206	204	14.5
Stanley (Dur.)	24,460	1,902	78	5,294	217	22.1

Group 4.

Towns in which the ratio of people employed in "Regional Services" is consistent with 5% - 15% of the population being dependent on regional functions.

Average proportion dependent on regional functions; 10%.

Whittlesey	8,301	656	79	1,988	240	8.7
Turton	11,847	937	79	2,636	221	9.0
Queensbury	5,761	456	79	1,309	227	11.9
Standish with Langtree	7,261	575	79	1,779	246	12.4
Loftus	7,631	600	79	1,748	229	16.2
Kearsley	9,757	767	79	1,975	202	19.8
Newburn	19,542	1,547	79	4,113	211	23.3
Llantarnam	7,283	576	79	1,228	170	41.5
Halesowen	31,059	2,476	80	6,510	210	14.2
Royton	16,689	1,333	80	3,794	226	17.1
Bilston	31,255	2,476	80	6,171	197	20.7
Buckley	6,899	550	80	1,264	184	33.5
Spennymoor	16,369	1,305	80	2,057	126	60.3
Jarrow	32,018	2,544	80	2,302	72	128.5
Holmfirth	10,407	837	81	2,083	200	9.1
Prescot	9,399	765	81	2,217	236	12.0
Westhoughton	16,078	1,390	81	3,432	214	15.7
Hindley	21,632	1,746	81	4,634	215	22.5
Felling	27,040	2,178	81	4,260	158	42.0
Lye and Wollescote	12,237	1,014	82	2,556	211	18.2
Littleborough	12,028	989	82	2,558	213	19.4
Church	6,187	507	82	1,323	215	21.6
Caerphilly	35,768	2,927	82	5,853	164	41.2
Cleator Moor	6,581	547	82	798	121	58.2

Group 4. (Cont.)

Atherton	19,989	1,647	83.	4,676	234	11.7
Hucknall	17,388	1,447	83	3,808	220	12.8
Oudworth	9,377	780	83	2,097	224	15.4
Sedgley	19,262	1,608	83	3,485	180	17.4
Oakengates	11,190	925	83	2,448	218	25.4
Bollington	5,027	423	84	1,155	229	9.0
Weetslade	7,734	649	84	1,662	215	15.4
Wenlock	14,149	1,196	84	2,930	207	16.3
Yeadon	7,672	641	84	1,522	198	16.9
Tipton	35,814	3,007	84	6,736	189	19.3
Middlewich	5,458	459	84	945	173	20.7
Wednesfield	9,330	791	84	1,690	181	28.3
Rawtenstall	28,587	2,443	85	6,725	235	7.1
Eastwood	5,360	453	85	1,230	235	10.2
Seaham Harbour	19,399	1,653	85	4,272	220	12.6
Belper	13,024	1,119	85	2,274	174	13.8
Spenborough	30,963	2,645	85	6,391	206	15.8
Billinge and Winstanley	5,111	435	85	1,050	205	16.8
Heywood	25,968	2,201	85	4,528	184	27.8
Risca	16,605	1,414	85	2,872	174	43.8
Wath upon Dearne	13,655	1,169	86	3,376	247	8.2
Newton in Makerfield	20,152	1,741	86	4,470	222	18.8
Morley	23,396	2,003	86	4,247	181	2412
Darwen	36,012	3,091	86	5,774	160	39.6
Ramsey	5,180	452	87	1,107	214	11.3
Barrowford	5,299	467	87	1,083	204	18.5
Wednesbury	31,531	2,725	87	6,113	195	25.0
Connah's Quay	5,980	518	87	807	135	54.5
Stourport	5,949	525	88	1,220	206	5.9
Bentley with Arksey	16,458	1,447	88	4,123	250	8.4
Brierley Hill	14,347	1,259	88	2,972	208	15.8
Rishton	6,633	586	88	1,279	192	23.8
Kidsgrove	9,938	880	88	1,825	184	27.7
Coalville	21,880	1,948	89	5,003	229	7.9
Ince in Makerfield	21,761	1,940	89	3,882	178	26.8

Group 4. (Cont.)

Winsford	10,998	988	90	2,005	182	16.2
Todmorden	22,222	2,006	90	4,565	206	16.4
Alfreton	21,234	1,907	90	4,583	216	17.0
Oldbury	35,926	3,261	90	6,708	188	18.1
Padiham	11,633	1,047	90	2,030	174	30.4
Hebden Bridge	6,321	571	91	1,338	212	5.4
Holbeach	6,112	556	91	1,433	233	5.6
Rugeley	5,662	517	91	1,135	200	7.6
Elland	10,326	934	91	2,235	216	11.8
Swanscombe	8,543	775	91	1,868	218	14.8
Haslingden	16,639	1,518	91	3,443	207	17.6
Redditch	19,281	1,768	92	3,896	202	13.3
Tottington	6,532	598	92	1,229	188	16.1
Aberdare	48,746	4,507	92	10,534	215	21.9
North Bromsgrove	10981	1,026	93	1,968	195	6.8
Ripley	13,413	1,257	93	2,954	222	11.0
Leigh	45,317	4,204	93	10,095	222	13.9
Consett	12,354	1,148	93	2,655	216	18.5
Radcliffe	24,675	2,299	93	4,783	193	18.9
Castleford	21,784	2,040	93	4,681	225	19.7
Brighouse	19,756	1,861	94	3,985	202	14.2
Houghton le Spring	10,616	995	94	1,841	174	25.3
Dalton in Furness	10,399	974	94	1,623	157	29.5
Thornaby on Tees	21,233	1,994	94	2,984	141	47.0
Kirkby in Ashfield	17,797	1,698	95	4,382	246	6.3
Ramsbottom	14,929	1,426	95	3,248	218	10.2
Birstall	7,204	679	95	1,236	174	24.2

Group 5.

Towns in which the ratio of people employed in "Regional Services" is consistent with 15% - 25% of the population being dependent on regional functions.

Average proportion dependent on regional functions : 20%

Benfieldside	9,193	877	96	1,637	178	14.7
Wolverton	12,873	1,255	97	2,829	219	7.5
Leek	18,567	1,801	97	3,525	190	10.6
Brierfield	7,696	741	97	1,611	198	16.0
Millom	7,405	718	97	1,295	175	21.0
Stalybridge	24,831	2,414	97	3,607	144	38.5
Middleton	29,188	2,885	98	5,822	200	16.6
Farnworth	28,717	2,840	98	5,067	176	18.8
Dukinfield	19,311	1,894	98	3,215	166	31.3
Upholland	5,605	556	99	1,114	199	18.4
Widnes	40,619	4,024	99	6,583	162	28.0
Egremont	6,017	595	99	919	153	33.8
Glossop	19,509	1,958	100	3,568	183	21.4
Rothwell	15,640	1,561	100	3,005	191	22.3
Shildon	12,691	1,275	100	1,850	146	35.0
Nuneaton	46,291	4,663	101	9,410	205	10.8
Chorley	30,796	3,105	101	5,257	171	21.8
Saddleworth	12,574	1,284	102	2,575	205	11.8
Denton	17,380	1,770	102	3,507	202	18.5
Stanley	14,565	1,501	103	3,086	211	11.2
Bryn Mawr	7,247	751	103	955	131	53.2
Scunthorpe and Fr	33,761	3,482	103	6,753	200	18.4
Paul	5,814	601	104	1,526	261	7.0
Ellesmere Port and Whitby	18,911	1,973	104	3,852	204	11.6
Midsomer Norton	7,490	775	104	1,507	201	12.4
New Mills	8,551	888	104	1,663	194	12.6
Loughborough	26,945	2,817	104	4,925	183	13.1
Northfleet	16,428	1,707	104	3,317	202	13.7
Knottingley	6,839	713	104	1,270	186	17.2
Wolstanton United	30,525	3,181	104	5,320	187	24.0

Group 5. (Cont.)

Normanton	15,684	1,642	105	3,781	240	8.8
Walton le Dale	12,720	1,334	105	2,391	188	14.8
Nelson	38,304	4,020	105	8,001	209	16.0
Pontypool	6,790	717	105	1,188	175	2512
Irlam	12,901	1,362	106	2,976	231	4.1
Chatteris	5,133	547	106	1,022	198	14.8
Bingley	20,533	2,153	106	3,353	164	16.6
Hyde	32,066	3,389	106	5,804	181	20.9
Hartlepool	20,537	2,182	106	1,895	93	77.2
Kenilworth	7,592	814	107	1,225	161	11.1
Colne	23,791	2,540	107	4,582	194	18.0
Pontypridd	42,717	4,581	107	5,252	123	4915
Barton upon Humber	6,322	680	108	1,095	173	14.2
Orrell	6,949	746	108	1,251	180	18.6
Farsley	6,158	669	109	1,210	196	11.6
Worksop	26,285	2,860	109	5,190	198	14.9
Keighley	40,441	4,408	109	7,323	181	19.3
Horbury	7,791	848	109	1,402	182	20.0
Failsworth	15,726	1,736	110	3,066	202	19.1
Gainsborough	18,689	2,062	110	3,045	164	37.5
Burry Port	5,755	633	110	726	126	43.5
Old Fletton	7,481	827	111	1,363	183	15.3
Sowerby	14,680	1,633	111	2.696	182	15.8

Group 6.

Towns in which the ratio of people employed in "Regional Services" is consistent with 25% - 35% of the population being dependent on regional functions.

Average proportion dependent on regional functions ; 30%

Kidderminster	28,917	3,254	112	5,495	191	6.9
Braintree	8,912	992	112	1,655	186	12.7
Whickham	20,756	2,328	112	3,698	178	19.9
Batley	34,573	3,877	112	3,877	166	22.7
Congleton	12,885	1,440	112	1,817	151	23.1
Whitehaven	21,159	2,378	112	3,251	154	25.6
Guisborough	6,306	699	112	743	118	43.4
Arnold	14,470	1,636	113	2,468	171	9.8
Pudsey	14,761	1,669	113	2,667	181	14.3
Sittingbourne and Milton	20,177	2,300	114	4,160	206	10.2
Accrington	42,991	4,919	114	8,822	206	13.6
Kingswood	13,268	1,512	114	2,305	174	20.5
Maryport	10,183	1,165	114	1,291	126	26.0
Hipperholm	5,383	616	115	997	185	8.2
Sandbach	6,411	748	116	1,155	180	1212
Longbenton	14,074	1,640	117	2,545	181	14.2
Beckmondwike	8,991	1,052	117	1,504	167	1888
Camborne	14,160	1,653	117	1,465	104	39.4
Bromsgrove	9,520	1,136	118	1,308	144	11.8
Northam	5,563	660	118	399	71	18.5
Ossett	14,838	1,742	118	2,512	168	19.0
Chepping Wycombe	27,988	3,325	119	6,199	222	6.2
Port Talbot	40,678	4,880	119	6,612	162	24.8
Wellington	7,132	861	120	1,164	172	7.3
Otley	11,034	1,324	120	1,984	180	12.1
Halstead	5,883	705	120	851	145	14.5
Droylsden	13,274	1,606	120	2,299	173	20.2
Northwich	18,732	2,247	120	2,812	150	27.7
Workington	24,751	2,959	120	4,313	174	19.4
Chester le Street	16,640	2,027	121	2,509	151	27.2
Clitheroe	12,008	1,449	121	1,604	132	29.2

Groups. (Cont.)

Beeston	16,017	1,962	122	2,571	160	12.0
St. Ives	6,687	820	122	535	81	21.6
Purfleet	8,511	1,051	124	1,697	198	5.7
Kettering	31,220	3,872	124	6,139	197	7.9
Guisely	5,607	696	124	1,069	192	9.5
Newark	18,060	2,239	124	3,184	176	15.2
Thornton Cleveleys	10,152	1,263	124	1,028	102	20.2
Hexborough	15,848	2,000	126	3,278	206	12.6
Ammanford	7,164	895	126	1,465	200	13.6
Mansfield	46,077	5,809	126	8,524	186	14.6
Worsley	14,502	1,851	128	2,801	194	9.3
Macclesfield	34,905	4,438	128	4,762	137	13.9
Burton upon Trent	49,486	6,366	128	8,191	165	15.2
Newcastle under Lyme	23,246	2,956	128	5,012	130	25.5

Group 7

Towns in which the ratio of people employed in "Regional Services" is consistent with 35% - 45% of the population being dependent on regional functions.

Avergge proportion dependent on regional functions: 40%

Windlesham	5,257	678	129	408	78	5.5
Tamworth	7,509	975	129	1,379	184	11.6
Dunstable	8,976	1,162	130	1,755	196	5.1
Mirfield	12,114	1,572	130	1,852	153	14.8
Biggleswade	5,844	761	130	1,002	171	15.0
Shipley	30,242	3,951	131	4,675	152	1313
Ardsley, E. & W.	9,216	1,210	131	1,368	149	25.5
Tettenhall	5,769	765	132	657	114	11.4
Audenshew	8,461	1,118	132	1,607	190	13.6
Neath	33,340	4,432	133	4,478	134	32.6
Hemel Hempstead	15,119	2,036	134	2,444	161	6.8
Blyth	31,680	4,247	134	4,451	140	31.0
~~Stevenage~~	~~5,476~~	~~733~~	~~135~~	~~868~~	~~193~~	~~5.6~~
Swinton and Pendlebury	32,761	4,427	135	5,776	176	1212
Pontefract	19,057	2,561	135	3,405	179	15.8
Wigston Magna	11,389	1,555	136	1,862	164	7.8
Market Harboro'	9,321	1,267	136	1,362	147	8.5
Bebington and Bromborough	26,740	3,618	136	4,118	154	12,0
Cowes	10,171	1,389	136	1,205	119	15.4
Brixham	8,145	1,135	138	833	102	8.2
Clevedon	7,029	960	138	640	91	9.5
Bredbury and Romilly	10,876	1,495	138	2,007	184	11.3
Wellingborough	21,223	2,921	138	3,464	164	12.7
Redcar	20,160	27782	138	2,684	133	18.2
Lynn	5,643	793	140	811	144	6.6
Milford Haven	10,104	1,424	140	2,340	232	8.3
~~Workington~~	~~21,169~~	~~2,962~~	~~140~~	~~4,213~~	~~203~~	~~19.4~~

Group 7 (Cont.)

Letchworth	14,454	1,892	141	2,398	165	10.0
Chesham	8,812	1,272	142	1,504	148	4.2
The Matlocks	10,599	1,502	142	1,305	123	7.9
Marlow	5,086	723	142	501	99	9.7
Llanelly	34,416	4,897	142	6,493	188	19.4
Chippenham	8,493	1,211	143	1,347	159	9.2
Long Eaton	22,345	3,182	143	3,587	161	13.8
Huyton with Roby	5,199	753	144	770	149	5.6
Tiverton	9,610	1,378	144	1,342	140	6.6
~~St. Helen's~~	~~5,601~~	~~795~~	~~144~~	~~279~~	~~61~~	~~7.0~~
Beccles	6,545	945	144	894	137	10.0
Frome	10,739	1,539	144	1,474	148	10.2

Group 8Y

Towns in which the ratio of people employed in "Regional Services" is consistent with 45% - 55% of the population being dependent on regional functions.

Average proportion dependent on regional functions : 50%.

~~Exmouth~~	~~14,591~~	~~2,110~~	~~145~~	~~731~~	~~50~~	~~6.6~~
Milton	5,293	715	146	354	67	4.4
Ware	6,181	901	146	822	133	8.2
Baildon	7,792	1,134	146	1,277	164	8.5
Ashby de la Zouche	5,091	746	146	764	151	12.1
Mangotsfield	11,251	1,638	146	1,550	138	13.4
Ulverston	9,234	1,350	146	1,168	126	23.7
Runcorn	18,127	2,661	147	2,643	146	18.2
Whitefield	9,107	1,355	148	1,506	165	8.6
Horsforth	11,776	1,754	148	1,817	154	9.3
Ely	8,381	1,236	148	1,181	141	13.9
Neston and Parkgate	5,676	784	148	398	70	16.5
Hoddesdon	6,811	1,017	149	851	125	6.4
Yeovil	19,077	2,837	149	3,192	166	9.3
Stafford	29,485	4,412	149	4,744	161	10.4
Chertsey	17,133	2,563	150	1,996	116	7.9
Burgess Hill	5,974	904	151	450	75	5.2
Stevenage	5,476	833	151	668	123	5.6
Stotfold	5,952	908	152	821	138	8.1
Kempston	5,390	826	152	890	166	9.7
Bridport	5,917	898	152	650	110	10.1
Dartford	28,871	4,375	152	4,227	147	10.3
Spalding	12,595	1,911	152	1,656	132	11.2
Sudbury	7,007	1,066	152	769	110	13.7
Panteg	11,449	1,735	152	1,871	163	19.0
			50%			
Leighton Buzzard	7,030	1,079	153	803	118	8.6
Chelmsford	26,537	4,065	153	4,104	155	7.5

Group 8 (Cont.)

Lancaster	43,383	6,672	154	6,594	152	6.3
Wokingham	7,294	1,124	154	568	78	8.3
Warminster	5,176	796	154	548	106	9.9
Altrincham	21,356	3,275	154	3,102	146	11.8
Knutsford	5,879	909	154	507	81	11.8
Nantwich	7,133	1,095	154	880	124	15.4
Selby	10,064	1,538	154	1,408	141	22.6
Warwick	13,459	2,088	155	1,621	120	13.0
Great Berkhampstead	8,052	1,250	156	868	108	6.5
Welshpool	5,639	892	156	692	123	12.2
Stamford	9,947	1,550	156	1,471	148	12.8
Slough	33,530	5,228	156	4,527	135	12.8
Bridgnorth	5,152	802	156	578	112	13.3
Bridgwater	17,139	2,675	156	1,969	115	17.8
Beverley	14,012	2,178	156	1,508	107	20.1
Portslade by Sea	9,527	1,498	158	731	77	7.7
Newquay	5,959	944	158	283	48	8.2
Fleetwood	23,001	3,634	158	4,625	201	9.6
Benfleet	12,091	1,903	158	873	72	10.3
Porthcawl	6,447	1,017	158	442	68	22.0
Redruth	9,904	1,560	158	815	82	27.6
Exmouth	14,591	2,310	159	731	50	6.6
Southborough	7,350	1,172	159	620	84	7.0
Lowestoft	41,768	6,638	159	3,996	96	21.6
Sidmouth	6,126	980	160	299	49	3.7
Alnwick	6,883	1,160	160	742	108	17.6
Mold	5,137	821	160	607	118	24.5
Walton on Thames	17,953	2,877	161	1,467	82	5.9
Uttoxeter	5,909	952	161	887	150	6.2
Rugby	23,826	3,818	161	3,996	169	8.3
Kendal	15,577	2,502	161	2,027	130	8.4

Group 9.

Towns in which the ratio of people employed in "Regional Services" is consistent with 55% - 65% of the population being dependent on regional functions.

Average proportion dependent on regional functions, 60%

Stroud	8,364	1,348	162	911	109	15.7
Pembroke	12,009	1,949	162	581	49	39.6
Bexhill	21,229	3,451	163	913	43	6.8
Farnham	18,297	2,977	163	1,307	71	8.0
Melton Mowbray	10,437	1,690	163	1,425	136	8.9
Christchurch	9,190	1,497	163	586	66	9.3
St.Helen's	5,501	896	163	279	51	7.0
Welwyn Garden City	8,586	1,400	164	860	100	5.2
Wilmslow	9,760	1,588	164	877	90	5.4
Burnham on Sea	5,120	846	164	270	53	8.0
East Dereham	5,643	922	164	774	137	8.1
Deal	13,681	2,247	164	1,314	99	8.4
Eastleigh and Bishopstoke	18,335	3,020	165	3,102	169	5.2
Paignton	18,414	3,028	165	878	48	5.8
Rayleigh	6,256	1,029	165	540	86	8.5
Wisbech	12,006	1,977	165	1,487	124	12.8
Great Driffield	5,915	973	165	605	102	18.8
Rickmansworth	10,809	1,794	166	1,031	95	4.5
Littlehampton	10,178	1,681	166	588	58	7.1
Basingstoke	13,865	2,297	166	1,973	142	8.7
Fareham	11,595	1,934	166	836	72	8.8
~~Penteg~~	~~11,449~~	~~1,736~~	~~166~~			
Grantham	19,711	3,263	166	2,001	102	23.7
Litherland	15,959	2,637	166	1,368	86	28.2
Sandown	6,168	1,031	167	259	42	5.6
Lymington	5,177	866	167	426	83	6.5
Marple	7,389	1,225	167	1,041	142	9.9
Hazell Grove and Bramhall	13,300	2,233	168	1,662	125	7.0
Saffron Walden	5,930	998	168	612	103	9.9
Whitstable	11,021	1,858	168	653	59	10.1
Ilfracombe	9,175	1,535	168	440	48	11.2
Ormskirk	17,218	2,894	168	2,226	129	12.8
Swanage	6,274	1,062	169	313	50	6.4
Egham	15,916	2,689	169	1,477	93	5.8
Windermere	5,702	962	169	405	71	6.6
Shanklin	5,072	855	169	212	42	7.5
Southwick	6,138	1,037	169	424	69	7.5

Group 9 (Cont.)

Sutton Coldfield	29,928	5,076	170	3,577	120	4.6
Teignmouth	10,017	1,701	170	735	86	10.2
Rochester	31,193	5,301	170	3,934	126	13.8
Colwyn Bay	20,886	3,552	170	1,232	59	13.8
Ripon	8,591	1,461	170	735	86	15.9
Evesham	8,799	1,502	171	1,319	150	4.5
Whitby	11,451	1,958	171	528	46	20.8
Lichfield	8,507	1,470	172	731	86	10.2
Denbigh	7,249	1,253	172	485	67	11.2
Shoreham by Sea	8,557	1,497	172	692	81	12.5
Falmouth	13,492	2,303	172	1,087	81	20.3
Trowbridge	12,011	2,090	173	1,564	130	7.3
Chatham	42,999	7,431	173	5,124	120	13.8
Maldon	6,559	1,137	173	714	109	25.3
Weybridge	7,364	1,280	174	661	90	4.0
Worthing	46,224	8,029	174	2,706	59	5.3
Ventnor	5,114	890	174	194	38	9.2
Clacton	15,848	2,754	174	722	46	9.3
Stourbridge	19,904	3,450	174	2,534	128	11.2
St. Austell	8,295	1,439	174	773	94	11.3
Henley on Thames	6,621	1,150	174	479	72	11.6
Ramsgate	33,603	5,887	174	2,146	64	13.4
Leominster	5,707	990	174	531	93	15.7
Eccles	44,416	7,718	174	5,878	132	16.5
Cheltenham	49,418	8,653	175	3,347	68	12.8
East Retford	14,229	2,487	175	1,615	113	13.5
Minehead	6,315	1,110	176	290	46	8.1
Knaresborough	5,942	1,047	176	371	63	11.7
Maidenhead	17,515	3,076	176	1,332	77	11.8
Bridlington	19,705	3,462	176	1,150	58	12.4
Morpeth	7,391	1,313	176	739	120	22.0
Skipton	12,461	2,210	177	1,698	136	7.3
Bedford	40,554	7,140	177	4,571	111	10.6
Crewe	46,069	8,133	177	6,248	135	16.1

Group 10.

Towns in which the ratio of people employed in "Regional Services" is consistent with 65% - 75% of the population being dependent on regional functions.

Average proportion dependent on regional functions ; 70%.

Stratford upon Avon	11,605	2,073	178	1,182	102	4.8
Hertford	11,378	2,026	178	1,157	102	6.9
Lytham St. Annes	25,764	4,568	178	1,799	70	8.9
Royal Leamington Spa	29,669	5,272	178	2,764	94	11.0
Alton	6,188	1,115	179	647	104	8.3
Barnstaple	14,700	2,630	179	1,189	81	14.9
Abingdon	7,241	1,314	180	775	107	7.6
Maidstone	42,280	7,601	181	4,951	118	6.6
Sale	28,071	5,062	181	3,844	136	7.4
Torquay	46,165	8,336	181	1,895	41	8.1
Whitchurch	6,017	1,086	181	622	103	12.9
Bishop Auckland	12,277	2,225	181	735	60	41.6
Woking	29,931	5,428	182	2,139	72	5.3
Ashford	15,248	2,773	182	2,174	143	5.8
Aylesbury	13,387	2,460	182	1,674	125	6.1
Carlton	22,325	4,059	182	2,625	118	9.0
Hexham	8,888	1,634	183	643	73	14.6
Wellington (Sal.)	8,186	1,497	183	872	107	15.7
Bognor Regis	13,521	2,485	184	539	40	5.9
Herne Bay	11,249	2,064	184	497	44	7.2
Scarborough	41,788	7,674	184	2,354	56	15.2
Sherborne	6,542	1,217	185	457	70	6.1
Newbury	13,340	2,463	185	1,079	81	11.0
Durham	16,224	3,007	185	1,107	68	29.0
Broadstairs and St.Peters	12,745	2,362	186	490	38	9.9
Hitchin	14,383	2,675	186	1,340	94	11.1
Cleethorpes	28,621	5,309	186	2,590	90	12.4

Group 10 (Cont.)

Sevenoaks	10,484	1,966	187	532	51	5.2
Bury St. Edmunds	16,708	3,118	187	1,490	89	19.0
Hale	10,667	2,015	188	1,085	102	5.3
Hythe	8,398	1,574	188	453	54	8.4
Skegness	9,122	1,719	188	581	63	11.2
Cirencester	7,209	1,351	188	550	76	11.8
Sleaford	7,025	1,325	188	511	73	14.8
Bideford	8,778	1,655	189	569	65	13.9
Dorking	10,111	1,923	190	669	66	5.1
Llandudno	13,679	2,612	190	656	48	11.6
Faversham	10,091	1,925	190	1,097	108	12.4
Louth	9,682	1,836	190	779	81	12.6
Godalming	10,401	1,985	191	704	68	6.9
Urmston	9,284	1,771	191	1,436	154	7.3
St. Albans	28,624	5,444	191	2,930	102	7.8
Bishops Stortford	9,510	1,836	192	918	96	4.8
Gosforth	18,044	3,454	192	1,620	90	9.2
Grays Thurrock	18,173	3,495	192	2,057	114	9.9
Devizes	6,058	1,163	192	418	69	12.5
East Grinstead	7,902	1,531	194	454	57	5.6
Ilkley	9,736	1,883	194	622	66	6.9
Andover	9,682	1,882	194	741	77	8.0
Malvern	15,634	3,024	194	888	57	8.5
Newton Abbot	15,010	2,926	194	1,169	78	9.6
Gravesend	35,495	6,867	194	3,885	109	12.3

Group 11.

Towns in which the ratio of people employed in "Regional Services" is consistent with 75% - 85% of the population being dependnent on regional functions.

Average proportion dependent on regional functions ; 80%

Redgate	30,825	5,992	195	2,059	67	4.8
Harrogate	39,770	7,747	195	2,086	57	8.0
Weston super Mare	28,554	5,606	195	1,488	52	8.1
Ryde	10,520	2,051	195	458	45	9.9
Harpenden	8,349	1,637	196	639	77	2.8
Tunbridge Wells	35,365	6,893	196	2,032	58	7.3
Morecambe and Heysham	24,524	4,811	196	1,370	56	10.2
Margate	31,341	6,190	196	1,220	39	12.0
Penarth	17,719	3,476	196	1,141	65	14.6
Tonbridge	16,333	3,237	198	1,540	95	7.2
Hessle	6,429	1,267	198	542	84	7.6
Horsham	13,580	2,698	198	1,058	78	9.1
Ludlow	5,642	1,126	199	290	51	19.2
Gottingham	6,179	1,231	200ø	661	108	6.9
Wrexham	18,569	3,708	200	2,097	113	18.1
Newtown and Llanllwchaiarn	5,154	1,027	200	465	90	18.2
Hornchurch	28,417	5,684	201	2,520	89	4.6
Hereford	24,163	4,849	201	1,861	77	11.3
Chester	41,440	8,366	202	3,921	95	14.2
Leatherhead	6,916	1,418	203	464	67	4.9
Folkestone	35,889	7,264	203	1,475	41	10.0
Banbury	13,953	2,827	203	1,398	100	10.4
Peterborough	43,551	8,832	203	5,548	127	11.2
~~Ormskirk~~	~~14,218~~	~~2,894~~	~~203~~	~~2,226~~	~~157~~	~~12.8~~
Seaford	6,570	1,346	205	244	37	5.6
Prestwich	23,881	4,866	205	2,443	102	6.4
Buxton	15,349	3,121	205	1,258	82	9.1
Whitley Bay and Monkseaton	24,210	4,962	205	1,930	80	13.4
Rhyl	13,485	2,757	205	636	47	13.8

Group 11 (Cont.)

Cheadle and Gatley	18,473	3,809	206	1,855	100	6.2
Boston	16,600	3,420	206	1,324	80	12.4
Caernarvon	8,469	1,743	206	487	58	21.7
Newport	11,322	2,340	207	889	79	8.2
Conway	8,772	1,825	207	631	72	11.2
Tilbury	16,825	3,480	207	1,014	60	14.8
Formby	7,965	1,654	208	464	58	6.6
Sheerness	16,738	3,488	208	2,220	134	8.2
Aberystwith	9,473	1,967	208	438	46	12.8
Haverfordwest	6,121	1,270	208	432	71	13.4
Romford	35,918	7,564	210	2,886	80	5.8

Group 12

Towns in which the ratio of people employed in "Regional Services" is consistent with 85% - 95% of the population being dependent on regional functions.

Average proportion dependent on regional functions ; 90%.

Barry	38,891	8,208	211	2,255	58	24.6
Canterbury	24,446	5,181	212	2,215	91	8.6
Lewes	10,794	2,279	212	949	88	8.8
Carmarthen	10,310	2,197	213	679	66	9.7
Berwick upon Tweed	12,229	2,609	213	1,093	89	14.3
Bridgend	10,029	2,136	214	757	76	14.8
Felixstowe	12,007	2,579	215	578	48	8.0
Great Crosby	18,285	3,939	215	1,056	58	8.8
Guildford	30,754	6,625	216	2,753	90	5.6
Penrith	9,066	1,956	216	635	70	9.6
Chichester	13,912	3,032	217	1,010	73	7.1
Bletchley	6,170	1,358	220	596	99	3.3
March	11,266	2,483	220	1,118	99	4.1
Bodmin	5,526	1,212	220	247	45	5.5
Weymouth	22,188	4,889	220	1,301	59	8.7
Brentwood	7,208	1,594	221	539	47	5.5
Dover	41,097	9,079	221	2,755	67	14.7
Abergavenny	8,608	1,903	221	409	48	16.8
King's Lynn	20,583	4,588	222	1,799	87	13.6
Hoylake and West Kirby	16,631	3,668	223	769	46	716
Taunton	25,178	5,601	223	1,730	69	717
Waterloo with Seaforth	31,187	6,990	225	1,797	58	19.2
Holyhead	10,700	2,405	225	384	36	21.2
Penzance	11,351	2,577	227	590	52	10.0

Group 13

Towns in which the ratio of people employed in "Regional Services" is consistent with over 95% of the population being dependent on regional functions, but is not more than 5% in excess of thestandard ratio.

Haywards Heath	5,391	1,229	228	298	56	4.7
Winchester	22,970	5,278	230	1,190	52	11.3
Truro	11,064	2,574	232	660	60	9.9
Newmarket	9,752	2,285	234	603	62	9.7
Caterham and Wat.	19,512	4,588	235	706	35	4.1
Bangor	10,960	2,560	235	605	55	9.1
Shrewsbury	32,372	7,596	235	2,071	64	11.2
Salisbury	26,460	6,240	236	1,296	49	8.3
Oswestry	9,754	2,316	236	589	60	11.4
West Bridgford	17,822	4,299	240	1,939	109	4.6
Colchester	48,701	11,734	240	3,944	81	8.4
Dorchester	10,030	2,402	240	694	69	9.3
Harwich	12,046	2,936	243	507	42	7.6
Goole	20,239	4,915	243	1,094	54	14.6

Towns in which the ratio of people employed in "Regional Services" is 5% - 15% in excess of the standard.

New Windsor	20,287	4,994	246	1,305	65	9.2
Brecknock	5,332	1,347	253	279	52	15.1
Hoole	5,889	1,499	254	472	80	11.6
Dartmouth	6,708	1,751	260	545	81	5.8

Group 14.

Towns in which the ratio of people employed in "Regional Services" is over 15% in excess of the standard.

Fulwood	7,386	1,929	262	554	75	16.6
Gosport	38,338	10,117	264	1,932	50	6.8
Newhaven	6,789	1,815	268	361	53	11.2
Walmer	5,335	1,504	282	252	48	4.4
Cheriton	9,876	2,904	~~295~~ 360	259	~~26~~ 32	5.1
Frimley and Camberley	16,532	4,925	297	495	30	4.0
Shoeburyness	6,720	2,021	300	303	45	3.9
Portland	12,019	3,809	316	1,288	108	9.3
Farnborough	16,356	6,979	428	341	21	2.8
Aldershot	34,280	14,884	436	1,183	35	4.2

Table 14

County Boroughs and Urban Districts with over 50,000 inhabitants, arranged according to the relative importance of the Regional function.

(1) Population
(2) Number of people, employed and unemployed, associated with "Regional Services"
(3) Ratio of (2) to the total population; expressed as the number so associated per 1,000 inhabitants.
(4) Number of men associated with productive activities.
(5) Ratio of (4) to the total population; expressed as the number so associated per 1,000 inhabitants.

Rhondda	141,344	11,380	80	40,339	265
West Bromwich	81,303	8,120	99	17,554	228
Coventry	167,083	16,844	101	43,022	257
St. Helen's	106,789	10,996	102	25,495	238
Merthyr Tydfil	71,108	7,379	103	20,099	281
Stoke on Trent	276,639	30,372	109	61,709	223
Oldham	140,314	15,453	110	33,806	230
Dudley	59,583	6,863	115	12,973	218
Rochdale	90,263	10,636	118	19,614	218
Smethwick	84,406	9,956	118	19,064	226
Rotherham	69,691	8,540	123	15,969	230
Luton	68,523	8,505	124	14,498	213
Barrow in Furness	66,202	8,262	124	16,727	254
Warrington	79,317	9,884	124	17,446	221
Ashton under Lyne	51,573	6,412	124	10,292	200
Walsall	103,059	12,778	124	20,579	200
Swindon	62,401	8,032	128	13,964	223
Bolton	177,250	22,802	129	36,998	209
Barnsley	71,522	9,323	130	15,469	217
Chesterfield	64,160	8,219	130	13,621	212
Stockton	67,722	8,883	130	13,995	206
Burnley	98,258	12,884	131	20,941	213
Halifax	98,115	13,327	135	19,092	195
Wigan	85,351	11,611	137	17,348	203

Wolverhampton	133,212	18,611	140	26,348	198
Bury	56,182	7,878	140	11,375	202
Sheffield	511,757	72,751	142	108,406	211
Dewsbury	50,302	7,709	142	10,635	196
Leicester	239,169	33,947	142	43,793	183
Birmingham	1,002,603	142,722	143	190,134	190
Huddersfield	113,475	16,279	144	22,710	201
Blackburn	122,697	17,603	144	23,293	189
Sunderland	185,824	27,485	148	32,716	176
Middlesborough	138,274	20,755	150	26,734	193
Lincoln	66,243	10,289	153	12,073	182
Northampton	92,341,	14,224	154	17,025	184
Darlington	72,086	11,216	156	12,817	177
Nottingham	268,801	42,600	158	43,032	160
Derby	142,303	22,512	158	25,184	177
Gateshead	122,447	19,540	159	19,812	162
Leeds	482,809	78,488	163	81,362	168
Stockport	125,490	21,168	168	21,195	169
Preston	119,001	20,062	168	17,760	149
Wakefield	59,122	10,125	170	9,903	167
Bradford	298,041	50,499	170	49,009	164
Norwich	126,136	21,562	171	18,833	149
Poole	57,211	9,893	172	4,643	81
West Hartlepool	68,135	12,063	176	10,348	156
South Shields	113,455	20,032	176	16,366	144
Doncaster	63,316	11,222	177	10,358	163
Ipswich	87,502	15,558	178	12,169	138
Swansea	164,797	30,444	184	25,411	154
Grimsby	92,458	17,111	184	14,884	161
Salford	223,438	41,393	186	35,531	160
Newcastle on Tyne	283,156	52,400	186	43,571	154
Great Yarmouth	56,771	11,588	~~187~~ 204	5,130	91
Tynemouth	64,922	12,195	188	9,153	141
Bath	68,815	12,940	188	6,233	91
Oxford	80,539	15,512	193	9,746	122
Carlisle	57,304	11,111	193	6,022	107
Worcester	50,546	10,588	194	6,712	132
Bournemouth	116,797	22,825	194	6,100	53
Bristol	397,012	77,368	195	43,309	124
Reading	97,149	19,165	197	11,933	122
Stretford	56,791	11,200	198	9,989	176
Manchester	766,378	151,864	198	114,196	150
Hove	54,993	10,982	200	2,885	53
Gloucester	52,937	10,691	202	6,405	121
Blackpool	101,553	20,955	207	6,736	66

Newport	89,203	18,561	208	11,205	126
Watford	56,805	11,861	210	6,170	108
Southport	78,925	16,634	210	5,887	74
Eastbourne	57,435	12,140	210	2,709	47
Hastings	65,207	13,788	211	3,023	46
~~Birkenhead~~	~~147,805~~	~~33,459~~	~~212~~	~~15,650~~	~~106~~
Brighton	147,427	31,415	213	10,972	74
York	84,813	17,958	213	10,025	118
Hull	313,544	67,352	215	38,094	122
Southampton	176,007	39,147	217	16,540	94
Greater London	8,200,942	1,800,533	219	844,462	104
Cambridge	66,789	14,791	221	4,644	70
Exeter	66,029	14,915	225	5,570	84
Birkenhead	147,803	33,459	227	15,650	106
Portsmouth	249,283	56,721	228	21,501	86
Southend	120,115	27,870	231	7,239	60
Plymouth	208,182	49,206	236	20,269	97
Liverpool	855,688	202,237	236	74,617	87
Bootle	76,770	18,245	238	6,268	81
Cardiff	223,589	53,597	240	21,124	94
Gillingham	61,536	15,178	246	7,500	122
Wallasey	97,626	25,078	255	7,196	74

Table 15

Urban Diatricts with more than 10% of their workers employed in Order III, Mining and Quarrying.

Thurnscoe	78.8	Newbiggin by the Sea	61.7	Ashton in Makerfield	46.6
Glyncorwg	77.1	Seaham Harbour	61.3	Eastwood	45.8
Bolton upon Dearne	75.4	Ryton	61.2	Tyldesley with Shakerley	45.6
Adwick le Street	74.9	Prudhoe	61.0	Merthyr Tydfil	45.3
Ogmore and Garw	74.0	Washington	60.2	Castleford	45.0
Royston	73.9	Crook	60.0	Ruthwaite	44.0
Maltby	73.0	Cwmamman	60.0	Ammanford	43.6
Willington	72.2	Ebbw Vale	60.0	Mexborough	43.5
Ashington	72.1	Wath upon Dearne	60.0	Hindley	42.8
Crook	72.0	Leadgate	59.6	Brynmawr	42.0
Mynyddislwyn	71.7	Cannock	59.2	Heanor	41.2
Warsop	71.0	Maesteg	59.2	Egremont	41.1
Darfield	69.6	Aberdare	58.8	Skelton and Brotton	40.8
Cramlington	69.0	Abram	58.8	Coalville	40.5
Bedwellty	68.6	Seaton Delaval	58.8	Worksop	40.4
Hoyland Nether	68.0	Worsborough	58.7	Spennymoor	40.3
Rhymney	68.0	Clay Cross	58.3	Huckmall	40.1
Mountain Ash	67.8	Haydock	58.2	Alfreton	39.5
Gelligaer	67.6	Tredegar	57.3	Whitehaven	39.4
Consisborough	67.5	Weetslade	56.8	Chester le Street	38.6
Bedlington	67.3	Ffestiniog	56.6	Risca	38.6
Hemsworth	67.2	Whitwood	56.0	Rugeley	38.3
Wombwell	67.0	Normanton	55.9	Stanley (W.R.)	37.0
Featherstone	66.4	Abersychan	54.4	Cleator Moor	36.8
Rhondda	66.5	Earsdon	54.3	Pontypridd	36.7
Blaenavon	65.0	Blaydon	53.2	Aspull	36.4
Bolsover	65.0	Brownhills	53. 2	Billinge and Winstanley	36.0
Stanley (Du.)	64.9	Kirkby in Ashfield	53.2	Winsford	36.0
Annfield Plain	64.8	Bentley with Arksey	51.8	Audley	35.8
Nantyglo and Blaina	64.5	Houghton le Spring	51.0	Ripley	35.8
Abercarn	64.1	Rawmarsh	49.5	Biddulph	35.6
Abertillery	64.1	Swinton	49.5	Longbenton	35.5
Brandon and Byshottles	64.0	Mansfield Woodhouse	48.8	Swadlincote	35.4
Darton	63.8	Newburn	48.0	Standish with Langtree	35.4
Tanfield	63.5	Caerphilly	47.0	Sutton in Ashfield	34.9
Gudworth	62.8				

Table 15 (Cont.)

Bedwas and Machen	34.5	Westhoughton	25.8	Gainsborough	16.1
Atherton	34.0	Burry Port	25.8	Consett	15.8
Kidsgrove	34.0	Nuneaton	25.3	Rotherham	15.6
Barnsley	33.5	Tamworth	23.0	Sedgley	15.2
Midsomer Norton	33.3	St. Helens	22.9	Swinton and Pendlebury	15.2
Skelmersdale	33.2	Wigan	22.8	Deal	15.0
Workington	32.9	Swanscombe	22.7	South Shields	14.7
Mansfield	32.8	Oakengates	22.5	Wrexham	14.6
Ince in Makerfield	32.8	Dawley	22.2	Dalton in Furness	14.5
Little Hulton	32.6	Middlewich	21.6	Stoke on Trent	14.4
Pontefract	31.5	Chesterfield	21.4	Benfieldside	14.2
Blyth	31.4	Worsley	21.3	Wallsend	13.9
Pontypool	30.5	Buckley	21.2	Arnold	13.8
Maryport	29.8	Llwchwr	20.2	Horbury	13.8
Bedworth	29.6	Stocksbridge	18.4	Northfleet	13.4
Whickham	28.8	Shildon	18.2	Kearsley	12.9
Millom	28.6	Purfleet	17.9	Belper	12.6
Loftus	28.5	Short Heath	17.8	Port Talbot	12.4
Upholland	28.3	Portland	17.6	Wakefield	12.3
Felling	28.1	Ashby de la Zouche	17.3	St. Austell	12.2
Ilkeston	27.5	Ossett	17.2	Farnworth	11.2
Rothwell	27.5	Ardsley East and West	17.0	Sunderland	10.4
Leigh	26.4	Clayton le Moors	16.4	Shepshed	10.2
Orrell	26.3	Wolstanton United	16.3		
Golbonne	25.9				

Table 16

Urban Districts with over 50% of their workers employed in manufacturing industries.

Marsden	80.0	Meltham	68.0	Kidderminster	62.3
Darlaston	79.2	Oldbury	67.9	Brighouse	62.2
Crompton	77.6	Oldham	67.8	Stourport	62.1
Barnoldswick	77.4	Yeadon	67.8	Kettering	61.8
Linthwaite	77.3	Radcliffe	67.7	Chorley	61.7
Golcar	75.7	Spenborough	67.7	Turton	61.7
Chadderton	75.6	Dukinfield	67.6	Irlam	61.6
Slaithwaite	75.6	Bilston	67.3	Warrington	61.5
Royton	74.9	Rishton	67.2	Audenshaw	61.4
Rushden	74.5	Farsley	67.1	Bury	61.3
Brierfield	73.1	Lye and Wollescote	67.0	Kearsley	61.1
Earby	72.8	Padiham	66.9	Shepshed	60.8
Quarry Bank	72.7	Queenbury	66.7	Heckmondwike	60.4
Willenhall	72.7	Glossop	66.4	Leicester	60.2
Haworth	72.3	Billingham	66.2	Loughborough	60.0
Hebden Bridge	72.3	Keighley	66.2	Halifax	59.9
Milnrow	72.3	Rochdale	66.1	Eston	59.8
Rawtenstall	72.3	Brierley	66.0	Bolton	59.7
Church	72.2	Tipton	66.0	Bingley	59.6
Leyland	72.2	Hyde	65.8	Batley	59.3
Todmorden	71.9	Coventry	65.2	Huddersfield	59.3
Heywood	71.6	Sowerby	65.0	Farnworth	59.2
Littleborough	71.1	Prescot	64.9	Guisely	59.0
Nelson	71.1	Halesowen	64.7	New Mills	58.9
Horwich	71.0	Holmfirth	64.7	Burnley	58.6
Bacup	70.6	Saddleworth	64.2	Wednesfield	58.6
Whitworth	70.6	Luton	64.1	Birstall	58.4
Ramsbottom	70.4	Darwen	63.9	Kingswood	57.9
Leek	70.0	Pudsey	63.9	Shipley	57.9
Barrowford	69.9	Accrington	63.8	Newton in Makerfield	57.8
Hinckley	69.9	Failsworth	63.8	Birmingham	57.5
Haslingden	69.6	Morley	63.4	Hebburn	57.2
Mossley	69.4	Tottington	63.4	Macclesfield	57.0
Elland	69.0	Wolverton	63.1	Congleton	56.9
Cosley	68.9	Droylsden	62.9	Otley	56.9
Denton	68.8	Great Harwood	62.9	Swindon	56.9
Flint	68.8	Walton le Dale	62.9	Barrow in Furness	56.8
Wednesbury	68.5	West Bromwich	62.9	Chepping Wycombe	56.8
Bollington	68.4	Stalybridge	62.8	Wigston Magna	56.7
Middleton	68.2	Smethwick	62.7	Dudley	56.5
Oswaldtwistle	68.2			Long Eaton	56.5
Rowley Regis	68.2				
Colne	68.1				
Redditch	68.1				

Table 16 (Cont.)

Blackburn	56.1
Old Fletton	55.4
Clayton le Moors	55.3
Braintree	55.1
Short Heath	55.1
Ashton under Lyne	55.0
Ellesmere Port and Whitby	54.3
Stocksbridge	54.3
Wellingborough	54.2
Bredbury and Romily	54.1
Beeston	54.0
Stoke on Trent	53.6
Northampton	53.4
Connah's Quay	53.3
Llantarnam	53.3
Hipperholm	53.2
Whitefield	53.0
Mirfield	52.8
Market Harborough	52.7
Bradford	52.6
Scunthorpe and Frodingham	52.6
Clitheroe	52.2
Leeds	52.2
Newark	51.9
Knottingley	51.9
Llanelly	51.7
Stockport	51.7
Thornaby on Tees	51.7
Walsall	51.6
Preston	51.5
Wolverhampton	51.4
Letchworth	51.1
Gainsborough	50.8
Sittingbourne and Milton	50.7
Yeovil	50.4

Table 17

Urban Districts with over 10% of their workers employed in metallurgical industries.

Darlaston	75.1	Gainsborough	35.2	Doncaster	22.8
Willenhall	68.7	Benfieldside	35.0	Urmston	22.6
Wednesbury	59.8	Chelmsford	34.6	Stafford	22.4
Quarry Bank	59.6	Dawley	34.6	Basingstoke	22.3
Coseley	59.1	N. Bromsgrove	34.3	Audenshaw	22.2
Bilston	58.7	Brierley Hill	33.4	Accrington	22.0
Prescot	56.8	Rotherham	33.4	Otley Hartlepool	21.9 21.6
Rowley Regis	55.0	Workington	32.9	Luton	21.6
Eston	54.0	Norwich	32.3	Gillingham	21.3
Tipton	53.2	Jarrow	31.7	Spenborough	21.2
Halesowen	52.3	Warrington	31.3	Rawmarsh	20.5
Redditch	52.0	Redcar	30.9	Sandbach	20.4
Coventry	51.0	Oakengates	30.8	Camborne	20.0
Hebburn	50.2	Neath	30.7	Millom	20.0
Short Heath	50.0	Loftus	30.6	Warwick	20.0
Barrow in Furness	49.5	Crewe	30.5	Stourbridge	19.8
Stocksbridge	49.3	Middlesborough	30.4	Newport	19.5
Wednesfield	49.3	Shildon	30.0	Keighley	19.4
Scunthorpe & Frodingham	48.3	Widnes	29.8	Dukinfield	19.2
Wolverton	48.3	Lincoln	29.5	Wenlock	19.2
Lye and Wollescote	48.0	Walsall	28.6	Failsworth	19.1
Swindon	47.8	Darlington	28.5	Sale	18.4
Smethwick	47.7	Chippenham	28.2	Eccles	18.2
W. Bromwich	46.8	Cowes	27.8	Swansea	18.1
Oldbury	46.4	Newark	27.3	Slough	18.0
Llanelly	45.4	Irlam	26.8	Horbury	17.9
Llwchwr	42.8	Leyland	26.8	Kempston	17.8
Rugby	42.6	Sheerness	26.7	W. Hartlepool	17.8
Consett	42.1	Kenilworth	2611	Yeovil	17.8
Eastleigh & Bishopstoke	41.2	Derby	26.0	Brighouse	17.6
Birmingham	39.5	Altrincham	25.9	Dartford	17.6
Newton in Makerfield	38.7	Uttoxeter	25.8	Pontypool	17.6
Sheffield	37.9	Dalton in Furness	25.6	Ulverston	17.6
Dudley	37.7	Ashford	25.3	Billingham	17.5
Port Talbot	37.7	Beeston	25.2	Grantham	17.4
Wolverhampton	37.5	Bromsgrove	25.2	Melton Mowbray	17.3
Ellesmere Port and Whitby	36.2	Letchworth	25.2	Oxford	17.2
Braintree	36.1	Loughborough	25.0	Chertsey	17.2
Wallsend	35.8	Chatham	24.8	Newcastle	17.1
Thornaby on Tees	35.7	Sedgley	24.8	Bedford	17.0
		Barton on Humber	24.4	Stourport	17.0
		Stamford	24.4	Risca	16.8
		Stockton on Tees	23.5	Gateshead	16.3
		Rochester	22.9	Chesterfield	16.0
				Skelton and Brotton	16.0
				Ilkeston	15.9

Table 7 (Cont.)

Sutton in Ashfield	15.8	East Retford	12.6
Leamington Spa	15.8	Huyton with Roby	12.6
Worcester	15.6	Lymington	12.5
Falmouth	15.4	Oswaldtwistle	12.4
Ashton under Lyne	15.2	Sunderland	12.4
Bedworth	15.2	Northfleet	12.3
Droylsden	15.1	Dunstable	12.1
Burry Port	15.0	Felling	12.1
Oldham	15.0	Whickham	12.1
Church	14.9	Biggleswade	11.9
Golborne	14.8	Dartmouth	11.9
Ipswich	14.8	Abingdon	11.6
Tettenhall	14.8	Wakefield	11.6
Bredbury & Romiley	14.6	Farsley	11.5
Plymouth	14.6	Hoole	11.4
Maldon	14.5	Bedwas and Machen	11.2
Halstead	14.2	Manchester	11.2
Tynemouth	14.0	Stalybridge	11.1
Portsmouth	13.9	Beverley	11.0
Peterborough	13.8	Buckley	11.0
Southampton	13.8	Elland	11.0
Chester	13.6	South Shields	10.9
Mold	13.6	Alfreton	10.8
Wellington (Sal.)	13.6	Huddersfield	10.8
Welwyn Garden City	13.6	Leeds	10.8
Lymm	13.5	Hale	10.6
Weybridge	13.5	Clayton le Moors	10.5
Denton	13.3	Leadgate	10.4
Salford	13.3	Whitchurch	10.4
Chadderton	12.9	Abersychan	10.4
Halifax	12.9	Kingswood	10.3
Belper	12.8	Rochdale	10.2
Guisborough	12.8	Whitley Bay & Monkseaton	10.2

Table 18

Urban Districts with over 10% of their workers employed in Textile Industries.

Marsden	76.1	Radcliffe	46.0	Droylsden	30.6
Crompton	72.9	Birstall	45.6	Wigston Magna	30.5
Barnoldswick	72.9	Farnworth	45.6	Horwich	30.0
Earby	68.2	Elland	44.7	Failsworth	28.9
Slaithwaite	68.0	Burnley	44.5	Preston	28.7
Golcar	67.8	Stalybridge	44.0	Belper	28.3
Royton	66.8	Guisely	43.5	Marple	27.8
Brierfield	66.0	New Mills	43.4	Stourport	27.6
Linthwaite	64.5	Kearsley	43.3	Sutton in Ashfield	27.4
Barrowford	63.2	Bolton	43.2	Atherton	27.0
Whitworth	63.2	Walton le Dale	43.0	Bridport	26.6
Nelson	63.0	Chorley	42.9	Ashton under Lyne	26.3
Leek	62.8	Pudsey	42.6	Worsley	26.2
Meltham	61.5	Rawtenstall	41.6	Huthwaite	25.8
Milnrow	60.5	Clitheroe	41.5	Swinton and Pendlebury	25.4
Haslingden	60.0	Shipley	41.1	Ossett	25.1
Mossley	58.5	Bingley	40.4	Ardsley East and West	24.5
Yeadon	58.2	Shepshed	39.5	Aspull	24.5
Littleborough	57.8	Keighley	38.7	Halstead	24.4
Hawaorth	57.3	Heckmondwike	38.3	Leicester	24.3
Ramsbottom	57.2	Bradford	38.1	Leyland	24.2
Todmorden	57.0	Mirfield	38.0	Tyldesley with Shakerley	24.2
Chadderton	56.9	Macclesfield	36.4	Loughborough	24.1
Hinckley	56.9	Skipton	36.2	Bedworth	23.7
Heywood Feint 56.1	56.4	Dukinfield	35.7	Ilkeston	23.7
Holmfirth	55.3	Baildon	35.5	Standish with Langtree	23.7
Padiham	54.9	Congleton	35.6	Clayton le Moors	23.4
Colne	54.8	Dewsbury	35.1	Bridgnorth	23.0
Queensbury	52.9	Long Eaton	35.1	Arnold	22.9
Rishton	52.5	Blackburn	34.7	Hindley	22.8
Great Harwood	52.0	Bury Darwen 24.3	34.2	Stockport	22.2
Bollington	51.7	Westhoughton	34.2	Tiverton	21.3
Middleton	51.0	Wellington (Somerset)	34.0	Heanor	21.2
Turton	51.0	Huddersfield	33.9	Ince in Makerfield	21.0
Tottington	49.4	Leigh	33.5	Golborne	20.9
Kidderminster	49.1	Spenborough	32.8	Horsforth	19.8
Morley	48.5	Whitefield	32.8	Hebden Bridge	19.8
Glossop	48.4	Bacup	32.6	Biddulph	19.7
Saddleworth	48.0	Brighouse	32.4		
Church	47.2	Halifax	32.4		
Oswaldtwistle	46.7	Hipperholm	32.4		
Rochdale	46.5	Accrington	32.0		
Batley	46.4	Little Hulton	31.9		
Farsley	46.3	Hyde	31.3		
Sowerby	46.3				
Oldham	46.2				

Table 18 (Cont.)

Nottingham	19.6	Wakefield	13.9
Nuneaton	19.3	Braintree	13.6
Beeston	18.8	Bredbury & Romiley	13.4
Sudbury	17.3	Abram	13.0
Carlton	17.2	Stanley (W.R.)	12.3
Lancaster	17.0	Derby	12.1
The Matlocks	16.8	Ripley	12.0
Horbury	16.1	~~Widnes~~	~~11.8~~
Otley Connah's Quay 159	16.0	Eccles	11.6
Trowbridge	15.8	Hazel Grove and Bramhall	11.4
Wigan	15.8	Salford	11.4
Prestwich	15.1	Mansfield Woodhouse	11.3
Coalville	15.0	Carlisle	10.9
Orrell	14.4	Denton	10.8
Audenshaw	14.0	Ashton in Makerfield	10.4

Table 18

Urban Districts with over 20% of their workers employed in the minor manufacturing industries.

Rushden	72.8	St. Helens	35.0	Litherland	25.0
Kettering	56.3	Bridgwater	34.8	Dartford	24.8
Chepping Wycombe	52.3	Middlewich	34.3	Warrington	24.2
Stoke on Trent	48.9	Irlam	34.1	Letchworth	24.1
Billingham	48.7	Runcorn	34.0	Salford	23.9
Knottingley	48.6	Swanscombe	34.0	Watford	23.6
Northampton	48.5	Leeds	33.7	Skelmersdale	23.5
Sittingbourne & Milton	48.0	Yeovil	32.4	Newark	23.4
Wellingborough	47.9	Brierley Hill	31.6	St. Albans	23.3
Old Fletton	47.3	Bristol	30.2	Buckley	23.0
Hebden Bridge	47.6	Great Berkhampstead	30.2	Purfleet	22.9
Kingswood	47.4	Northfleet	30.2	Tonbridge	22.7
Hemel Hempstead	45.7	Aylesbury	29.8	Walsall	22.7
Market Harborough	45.6	Rawtenstall	29.7	Worcester	22.7
Denton	44.7	Newcastle under Lyme	29.4	Wigston Magna	22.5
Bebington and Bromborough	43.2	Ware	28.4	Gloucester	22.4
Luton	41.7	Leicester	28.1	Marlow	22.4
Dunstable	40.4	Lancaster	28.0	Rothwell	22.4
Nantwich	39.9	Kendal	27.6	Trowbridge	22.3
Northwich	39.2	Darwen	27.2	Tamworth Rate Orig 22.0	22.0
Burton on Trent	39.0	York	26.1	Bletchley	21.9
Stone	38.3	Stroud	27.0	Wenlock	21.8
Norwich	38.1	Reading	26.6	Kidsgrove	21.7
Widnes	37.4	Beccles	26.1	Banbury	21.5
Chesham	37.2	Bredbury and Romiley	26.1	Ipswich	21.5
Mangotsfield	37.1	Hyde	26.0	Clayton le Moors	21.4
Wolstanton United	36.8	Selby	26.0	Faversham	21.3
Bacup	35.5	Maidstone	25.9	Leighton Buzzard	21.2
Swadlincote District	35.3	Frome	25.8	Carlisle	21.0
		Hertford	25.6	Leyland	21.0
		Kempston	25.5	Liverpool	21.0
		Whittlesey	25.5	Stockport	20.9
		Stafford	25.4	Sedgley	21.0
		Manchester	25.3	Oldbury	20.7
		Audenshaw	25.2	Taunton	20.6

Table 20

Urban Districts with over 10% of their workers employed in Defence Services or Administration.

(a) Defence Services		(b) Administration	
Farnborough	65.0	Bodmin	21.1
Aldershot	62.0	Durham	19.7
Cheriton	52.2	Brentwood	17.7
Portland	47.2	Denbigh	16.2
Gosport	43.2	Bridgend	15.2
Frimley and Camberley	37.8	Dartford	15.0
Shoeburyness	37.5	Fulwood	14.9
Walmer	37.5	Morpeth	14.1
Gillingham	31.0	Chichester	13.8
Sheerness	24.0	Cottingham	13.6
Portsmouth	22.5	Bishop Auckland	13.4
Plymouth	21.0	Carmarthen	13.1
Pembroke	19.2	Sleaford	12.7
Fulwood	17.8	Caernarvon	12.6
Colchester	17.5	Lichfield	12.6
Chatham	14.7	Lewes	12.3
Bodmin	13.8	Prestwich	12.2
Dover	11.8	Brecknock	11.8
Hythe	11.8	Hoole	11.6
Dartmouth	11.7	Fareham	11.5
Felixstowe	11.4	Beverley	11.3
Fareham	11.3	Wakefield	11.2
Kempston	10.6	Warwick	11.1
Windsor	10.0	Dorchester	11.0
		Whitby	11.0
		Mold	10.9
		Aylesbury	10.8
		Stafford	10.8
		Colchester	10.7
		Barry	10.6
		Windsor	10.6
		Abergavenny	10.4
		Bangor	10.4
		Houghton le Spring	10.2
		Maidstone	10.2
		Redruth	10.2
		Romford	10.2
		West Bridgford	10.2
		Wallasey	10.1
		Winchester	10.1

Table 21

Urban Districts with over 10% of their workers employed in transport services.

Goole	40.6	Port Talbot	14.8	Cudworth	11.6
Tilbury	40.6	Swansea	14.8	Cleethorpes	11.4
Holyhead	38.1	Bangor	14.6	Gateshead	11.4
Newhaven	36.1	Boston	14.5	Skipton	11.4
Harwich	33.2	Dover	14.4	Buxton	11.3
March	32.6	Berwick	14.3	Ashford	11.2
(Fishguard - Goodwick)	31.7	Gravesend	14.2	Romford	11.2
Barry	30.6	Faversham	13.9	Normanton	10.8
Bletchley	27.4	Hartlepool	13.9	Salisbury	10.8
Crewe	22.0	Hessle	13.8	Chester	10.7
Bootle	24.7	Shrewsbury	13.8	Grantham	10.7
Dartmouth	20.6	Mirfield	13.6	Ormskirk	10.7
Hoole	20.1	Newton Abbot	13.6	Hornchurch	10.6
Panteg	20.0	Shildon	13.4	Derby	10.5
Abergavenny	19.9	Carlisle	13.3	Knottingley	10.5
Newport (Mon.)	19.5	Long Eaton	13.1	Maryport	10.5
Southampton	18.6	Wallasey	12.9	St. Helens (I.O.W.)	10.5
Peterborough	19.2	Morecambe and Heysham	12.8	Hitchin	10.4
Eastleigh and Bishopstoke	18.2	Tonbridge	12.8	Truro	10.2
Penarth	18.0	West Hartlepool	12.8	Bridgend	10.0
Blyth	17.6	York	12.7	Bristol	10.0
Conway	17.6	Grimsby	12.6	Rugby	10.0
Grays Thurrock	17.6	Middlesborough	12.6		
Litherland	17.5	Carmarthen	12.5		
Hull	17.1	Falmouth	12.5		
Ardsley East and West	17.0	Shoeburyness	12.5		
Waterloo with Seaforth	17.0	Tynemouth	12.4		
Birkenhead	16.9	Doncaster	12.3		
Cardiff	16.9	Selby	12.3		
King's Lynn	16.7	Gloucester	12.2		
Carlton	16.6	Mexborough	12.2		
Liverpool	16.6	Penzance	12.2		
Oswestry	16.2	Banbury	11.9		
East Retford	15.7	Old Fletton	11.9		
Burry Port	15.2	Taunton	11.9		
Runcorn	15.0	Bishop Auckland	11.8		
South Shields	15.0	Newport (I.O.W)	11.8		
		Stourbridge	11.8		
		Watford	11.7		

Table 22

Towns with over 5,000 inhabitants that function as Health Resorts or Residential Centres showing the number of people and the percentage of the population dependent on these functions.

(1) Population
(2) Proportion of workers employed in "Local Services" group (per 1,000 workers.
(3) Number of people dependent on ordinary regional functions.
(4) Number of people supported by productive activities independent of the Health Resort function.
(5) Number of people dependent on the function as a Health Resort.
(6) Proportion of the population dependent on the Health Resort function.

	(1)	(2)	(3)	(4)	(5)	(6)
Windlesham	5,257	526		1,000	4,257	81%
Shanklin	5,072	515	1,100	240	3,732	74%
Sidmouth	6,126	513	1,000	460	4,666	76%
Newquay	5,959	483	1,100	420	4,439	74%
Bexhill	21,229	477	400	1,100	19,729	93%
Llandudno	13,679	466	6,400	984	6,295	46%
Sandown	6,168	465	1,900	300	3,968	65%
Swanage	6,274	465	400	500	5,374	86%
Ventnor	5,114	464	1,300	160	3,654	71%
Sevenoaks	10,484	459	4,300	868	5,316	51%
Windermere	5,702	458	800	932	3,970	70%
Torquay	46,165	457	18,000	2,060	25,565	55%
Exmouth	14,591	451	4,200	1,170	9,221	63%
Skegness	9,122	450	3,400	1,230	4,492	49%
Minehead	6,315	448	1,600	400	4,315	68%
Paignton	18,414	448	4,200	1,300	12,914	70%
Milton	5,293	446	-	780	4,513	85%
Bognor	13,521	444	5,300	540	7,681	57%
Neston and Parkgate	5,676	444	-	910	4,766	84%
Leatherhead	6,916	436	2,500	1,020	3,396	49%
Ilfracombe	9,175	435	3,100	660	5,415	59%
Teignmouth	10,017	435	1,600	1,740	6,677	67%
Eastbourne	57,435	433	27,500	1,500	28,435	49%
Clacton	15,848	427	4,600	980	10,268	65%
Burgess Hill	5,974	425	300	1,090	4,584	77%
East Grinstead	7,902	423	3,300	860	3,742	47%
Bournemouth	116,797	422	43,300	5,250	68,247	59%
Seaford	6,570	422	1,000	190	5,380	82%
Littlehampton	10,178	421	2,400	1,140	6,638	66%
Colwyn Bay	20,886	420	4,000	2,390	14,496	70%

Burnham on Sea	5,120	419	∅ 200	460	4,460	87%
Northam	5,563	419	-	930	4,633	83%
Weybridge	7,364	418	1,400	1,760	4,204	57%
Walton on Thames	17,953	417	1,800	3,710	14,243	80%
St. Helens'	5,051	416	1,800	510	2,741	54%
Broadstairs	12,745	414	-	430	12,315	97%
Margate	31,341	414	13,800	1,120	16,421	52%
Christchurch	9,190	411	3,800	1,240	4,150	45%
Hove	54,993	409	17,600	2,500	34,893	64%
Dorking	10,111	407	5,600	1,460	3,051	30%
Malvern	15,634	406	2,700	1,670	11,264	72%
Harrogate	39,770	405	19,400	3,560	16,810	42%
Farnham	18,297	404	6,600	3,030	8,667	47%
Henley on Thames	6,621	404	2,800	1,120	2,701	41%
Worthing	46,224	404	11,500	5,264	29,460	64%
Hythe	8,398	402	4,600	1,000	2,798	34%
Folkestone	35,889	398	22,500	1,580	11,809	33%
Tunbridge Wells	35,365	398	23,700	3,890	7,775	22%
Wokingham	7,294	393	1,400	1,420	4,474	61%
Bridlington	19,705	391	8,200	2,240	9,265	47%
Herne Bay	11,249	390	4,000	600	6,649	59%
Godalming	10,401	388	4,400	1,570	4,431	43%
Knutsford	5,879	388	1,500	1,320	3,059	52%
Wilmslow	9,760	388	2,400	2,340	5,020	52%
Portslade	9,527	386	2,600	1,780	5,147	54%
Weston Super Mare	28,554	384	14,400	2,510	11,644	41%
Scarborough	41,788	381	18,000	1,090	22,698	54%
Felixstowe	12,007	380	8,700	864	2,443	20%
Ilkley	9,756	380	4,200	1,320	4,216	43%
Hastings	65,207	379	32,700	1,500	31,007	47%
Lytham St.Annes	25,764	378	6,700	4,110	14,954	58%
Whitby	11,451	377	3,700	710	7,041	61%
Southborough	7,350	376	2,200	1,600	3,550	48%
Woking	29,931	376	13,800	4,960	11,171	37%
Marlow	5,086	375	560	1,400	3,126	62%
Reigate	30,825	373	15,800	4,560	10,465	34%
Rhyl	13,485	373	8,400	920	4,165	31%
Hoylake and West Kirby	16,631	372	11,200	1,080	4,351	26%
Lymington	5,177	372	1,800	1.080	2,257	44%
Knaresborough	5,942	369	3,000	770	2,172	36%
Poole	57,211	369	16,600	8,500	32,111	56%
Ryde	10,520	369	6,300	570	3,650	35%
Cheltenham	49,418	365	13,800	7,470	28,148	57%
St. Ives	6,687	364	-	1,500	5,187	77%
Southwick	6,138	363	2,250	970	2,918	48%
Maidenhead	17,515	362	6,800	3,220	7,495	43%
Egham	15,916	359	300	4,000	11,616	73%
Blackpool	101,553	358	55,000	9,700	46,853	46%
Haywards Heath	5,391	358	2,800	270	2,321	43%
Rickmansworth	10,809	358	2,500	2,820	5,489	51%

Morecambe and Heysham	24,524	556	16,000	2,520	6,004	24%
Cirencester	7,209	353	3,700	1,330	2,179	30%
Whitstable	11,021	349	3,800	1,290	5,931	54%
Porthcawl	6,447	346	800	1,000	4,647	72%
Clevedon	7,029	336	-"-	1,720	5,309	76%
Hexham	8,888	335	4,500	1,500	2,888	32%
Ramsgate	33,603	335	13,200	4,500	15,903	47%
Buxton	15,349	331	9,600	3,200	2,549	17%
Brighton	147,427	330	88,000	18,400	41,027	28%
Southport	78,925	327	45,000	12,800	21,125	27%
Bath	63,815	326	29,200	13,400	21,215	33%
Stratford on Avon	11,605	326	4,100	3,340	3,865	33%

There were three towns excluded from the above table because they had over 50% of the workers employed in Regional Services. They were:

		LS.	RS.			
Aberystwith	9,473	360	502	4,000	620	4,853	51%
Formby	7,965	327	502	4,300	900	2,765	35%
Winchester	22,970	336	528	20,000	2,000	970	4%

Three other towns were excluded because the number of workers in Regional Services was not sufficient to bring the total workers in the Services over 70%

Caterham & Warlingham	19,512	327	347	4,300	5,750	9,462 (1)	49%
Chertsey	17,679	327	347	1,800	5,940	9,393	55%
Tettenhall	5,679	406	292	-	1,900	3,774	66%

(1) Including 3,750 people supported by the garrison.

Table 23.

Towns in which the proportion of water transport workers was over 5 per 1,000 inhabitants.

(1) Number of water transport workers.
(2) Ratio of water transport workers per 1,000 inhabitants
(3) "Regional Services" ratio less water transport workers.
(4) Corresponding percentage of population dependnent on ordinary regional functions
(5) Number ofpeople supported by ordinary regional functions.

Dartmouth	577	86	174	63	5,500
Runcorn	1,035	57	90	12	2,200
Gravesend	1,577	44	150	49	17,400
Waterloo with Seaforth	1,389	44	181	67	21,000
Penarth	771	43	160	54	9,500
Litherland	655	40	126	34	5,400
Falmouth	503	39	133	38	5,100
Hessle	203	31	167	58	3,700
Blyth	860	27	107	22	7,000
Great Crosby	516	28	187	71	13,000
Dover	1,095	26	195	76	31,000
King's Lynn	455	22	200	79	16,200
Morecambe and Heysham	560	22	Holiday Resort.		
Cleethorpes	627	21	165	57	16,300
Port Talbot	863	21	98	17	6,900
Penzance	184	16	211	86	9,700
Bebington and Bromborough	399	15	121	31	8,300
Folkestone	511	14	Holiday Resort.		
Weymouth and Melcombe Regis	316	14	Holiday Resort		
Boston	221	14	192	65	10,800
Rochester	429	13	157	52	16,200
Shoreham by Sea	111	12	160	54	4,800
Hoylake and West Kirby	204	12	Holiday Resort.		
Whickham	236	11	101	19	4,000
Eccles	439	10	164	57	25,000
Hornchurch	294	10	191	73	21,000
Lowestoft	460	10	149	49	20,400
Llanelly	350	9,	118	29	11,200
Whitley and Monkseaton	222	9	196	77	18,600
Workington	204	8	112	25	6,200
Romford	270	7	203	80	29,000
Gosforth	126	7	185	70	12,600
Felixstowe	90	7	Holiday Resort		
Caernarvon	63	7	199	78	6,600

Table 23 (Cont.)

Deal	91	6	158	54	7,400
Sheerness	114	6,	202	80	13,400
Newark	109	6	118	29	5,400
Newport	69	6	201	79	8,800
Beverley	95	6	150	49	6,900
Whitehaven	109	5	107	22	4,700
St. Austell	43	5	169	60	5,000
Penfleet	62	5	153X	50	6,000
Urmston	57	5	186	70	6,500
Redcar	102	5	133	39	7,800

Table 24

The number of people dependent on ordinary regional services in towns in which land transport services are of more than normal importance, but are not predominant over all other services.

(1) Ratio of land transport workers per 1,000 inhabitants.
(2) "Regional Services" ratio.
(3) Number of people dependent on all services.
(4) Adjusted "Regional Services" ratio.
(5) Number of people dependent on ordinary regional services

	(1)	(2)	(3)	(4)	(5)
Hoole	146	268	6,800	160	3,750
Peterborough	79	203	35,300	164	24,800
Abergavenny	75	221	7,900	186	6,000
Carlton	73	182	15,200	149	10,700
Eastleigh and Bishopstoke	73	165	10,400	132	6,750
Conway	72	207	7,250	175	5,600
Panteg	70	166	6,780	136	4,600
Ardsley East and West	68	131	3,400	103	1,850
Oswestry	66	236	9,750	210	8,300
East Retford	63	175	9,100	152	7,400
Bangor	59	235	11,000	216	9,700
Mirfield	59	130	4,350	111	3,000
Long Eaton	58	143	9,800	125	5,600
Skipton	58	177	8,000	159	6,750
Shrewsbury	57	235	32,500	218	29,000
Berwick upon Tweed	56	213	10,600	197	9,400
Newton Abbot	55	194	11,300	179	9,900
Shoeburyness	54	300	6,720	286	6,720
Taunton	54	223	23,500	209	21,200
Tonbridge	54	198	12,700	184	11,200
Banbury	51	203	11,200	192	10,300
Buxton	51	205	Holiday Resort		
Boston	50	192	10,800	182	10,600
Faversham	50	186	7,000	176	6,500
Stourbridge	50	174	12,500	164	10,200
Carmarthen	49	213	9,000	204	8,400
Ashford	47	182	10,400	175	9,750
Chester	47	202	33,000	195	31,500
Mexborough	47	126	5,400	119	4,600
Newport (I.O.W.)	47	207	9,400	200	8,900
Rugby	47	161	13,100	152	11,900

Table 24 (Cont.)

Selby	47	164	5,100	147	4,600
Hitchin	46	186	10,100	180	9,500
Salisbury	45	236	26,460	231	25,800
Burry Port	44	110	1,380	106	1,210
King's Lynn	46	200	16,200	194	15,400
Old Fletton	44	110	1,900	107	1,600
Ormskirk	44,168		10,200	164	9,800
Normanton	43	105	3,300	102	3,000
Truro	43	232	10,800	229	10,600
Neath	42	133	12,700	131	12,000
Wellingborough	42	138	8,700	136	8,500

Table 25

Towns in which the ratio of workers in the Defence Services is over 5 per 1,000 inhabitants.

(1) Number of workers in the Defence Services.
(2) Ratio of workers in the Defence Services, per 1,000 inh.
(3) Ratio of workers in ordinary regional services
(4) Percentage of the population supported by ordinary regional services.
(5) Number of people supported by ordinary regional services.

	(1)	(2)	(3)	(4)	(5)
Farnborough	5,664	345	83	8	1,300
Aldershot	11,361	340	96	15	5,100
Cheriton	2,136	265	95	15	1,200
Portland	2,841	236	80	7	800
Frimley and Camberley	3,124	190	107	22	3,600
Gosport	6,771	177	87	10	3,800
Walmer	922	172	110	24	1,300
Shoeburyness	1,104	164	122	31	2,100
Sheerness	1,632	97	105	21	3,500
Caterham & Warlingham	1,709	87	148	48	9,400
Fulwood	589	80	182	68	5,000
Colchester	3,746	77	163	57	28,000
Chatham	2,428	56	113	26	11,200
Dartmouth	360	53	121	26	1,700
Pembroke	632	52	110	22	2,700
Felixstowe	597	50	Holiday Resort		
Hythe	416	49	Holiday Resort		
Bodmin	265	48	172	62	3,400
New Windsor	974	48	198	78	15,800
Dover	1,853	45	150	49	20,300
Weymouth and Melcombe Regis	890	40	Holiday Resort		
Fareham	453	39	127	34	4,000
Brecknock	202	38	215	88	4,700
Winchester	816	36	194	74	17,000
Dorchester	327	32	208	84	8,400
Sleaford	222	31	157	53	3,700
Andover	295	30	164	57	5,500
Chichester	360	26	191	73	10,200
Pontefract	491	26	111	25	4,700
Salisbury	672	25	211	85	22,500
Farnham	431	23	Holiday Resort		

Table 25 (Cont.)

Canterbury	510	21	191	74	18,000
Rochester	655	21	136	40	12,600
Berwick on Tweed	242	20	177	65	8,000
Wigston Magna	205	18	118	29	3,300
Gravesend	557	16	134	39	14,000
Deal	218	16	142	43	5,900
Wrexham	303	16	184	69	12,800
Bury St. Edmunds	261	15	172	61	10,200
Newhaven	104	15	Transport Centre		
Lichfield	103	12	160	55	4,500
Ormskirk	206	12	152	50	8,500
Hornchurch	330	11	180	67	19,000
Taunton	282	11	198	78	19,600
Shrewsbury	364	11	207	83	26,800
Harwich	127	10	Transport Centre		
Grantham	201	10	156	52	10,200
Melton Mowbray	102	10	156	51	5,300
Woking	294	10	Holiday Resort		
Guildford	282	9	207	83	25,500
Trowbridge	114	9	164	57	6,800
Waterloo with Seaforth	296	9	172	62	19,400
Maidstone	332	8	172	62	26,000
Aylesbury	90	6	176	65	8,700
Chester	267	6	189	72	29,700
Folkestone	225	6	Holiday Resort		
Hitchin	90	6	174	63	9,000
Lancaster	253	6	148	48	21,000
Ramsgate	192	6,	Holiday Resort		

Table 26

Holiday Resorts included in Tables 23,24 and 25.

(1) Number of people in selected Regional Services, excluding water transport and Defence services.
(2) Adjusted Ratio of Selected Regional Services.
(3) Percentage of population supported by ordinary regional services.
(4) Number of people supported by ordinary regional services.

Brighton	25,720	175	56	82,000
Hoylake and West Kirby	2,654	160	53	8,800
Buxton	2,555	156	47	7,200
Folkestone	5,376	152	43	15,200
Margate	4,704	150	40	12,500
Morecambe and Heysham	3,664	149	40	9,800
Ryde	1,554	148	39	4,100
Ramsgate	4,630	139	28	9,400
Woking	4,165	139	28	8,400
Weymouth & Melcombe Regis	3,085	138	28	6,200
Farnham	2,182	119	5	900
Felixstowe	1,424	118	4	500

Table

Urban Districts arranged in order of the number of people dependent on ordinary regional functions.

Greater London 6,100,000

Provincial Centres.

Liverpool		515,000
Manchester		515,000
Birmingham		380,000
Bristol	Leeds 236,000	230,000

Regional Centres.

Sheffield	190,000	Stockport	65,000
Bradford	158,000	Norwich	63,000
Cardiff	154,000	Reading	63,000
Hull	154,000	Derby	60,000
Newcastle on Tyne	153,000	Sunderland	58,000
Nottingham	132,000	Blackpool	55,000
Salford	114,000	Preston	55,000
Southend	96,000	Bolton	53,000
Leicester	88,000	Stoke on Trent	53,000
Portsmouth	87,000	Gateshead	51,000
Brighton	82,000	Swansea	51,000
Plymouth	79,000		
Wallasey	74,000		
Birkenhead	73,000		
Southampton	72,000		

Market Towns.

Exeter	49,000	Grimsby	32,000
Wolverhampton	48,000	Halifax	32,000
Blackburn	47,000	Wakefield	31,000
Ipswich	46,000	Burnley	30,000
Southport	45,000	Wigan	30,000
York	45,000	Bath	29,000
Bournemouth	43,000	Bootle	29,000
Huddersfield	43,000	Carlisle	29,000
Newport	42,000	Chester	29,000
Northampton	39,000	Romford	29,000
Cambridge	39,000	West Hartlepool	29,000
Watford	38,000	Colchester	28,000
Middlesborough	36,000	Eastbourne	28,000
Gloucester	34,000	Walsall	28,000
Stretford	34,000	Yarmouth	28,000
Worcester	34,000	Lincoln	27,000
Hastings	33,000	Shrewsbury	27,000
Oxford	33,000	Bedford	26,000
Doncaster	32,000	Guildford	26,000
Darlington	32,000	Maidstone	26,000
		Oldham	26,000

Coventry	25,000	Eccles	25,000

Medium-sized Market towns.

Peterborough	24,000	Folkestone	15,000
Tunbridge Wells	24,000	Gillingham	15,000
Tynemouth	24,000	King's Lynn	15,000
Barnsley	22,000	Ashton under Lyne	14,000
Salisbury	22,000	Cheltenham	14,000
Rochdale	22,000	Dartford	14,000
Lancaster	21,000	Gravesend	14,000
St. Albans	21,000	Stafford	14,000
Stockton on Tees	21,000	Weston super Mare	14,000
Warrington	21,000	Barrow in Furness	13,000
Chesterfield	20,000	Chelmsford	13,000
Dewsbury	20,000	Dudley	13,000
Dover	20,000	Gosforth	13,000
Lowestoft	20,000	Margate	13,000
Smethwick	20,000	Rochester	13,000
Taunton	20,000	Swindon	13,000
Bury	19,000	Swinton and Pendlebury	13,000
Harrogate	19,000	Wrexham	13,000
Hornchurch	19,000	Great Crosby	12,000
Luton	19,000	Neath	12,000
Herford	19,000	Rugby	12,000
Macclesfield	19,000	Accrington	11,000
Prestwich	19,000	Altrincham	11,000
Sale	19,000	Barry	11,000
Waterloo with Seaforth	19,000	Boston	11,000
Whitley and Monkseaton	19,000	Carlton	11,000
Canterbury (have 18,000	18,000	Chatham	11,000
Rotherham	18,000	Durham	11,000
Scarborough	18,000	Horsham	11,000
Sutton Coldfield	18,000	Leamington	11,000
Torquay	18,000	Llanelly	11,000
West Bridgford	18,000	Merthyr Tydfil	11,000
Burton on Trent	17,000	Shipley	11,000
Poole	17,000	Tonbridge	11,000
Slough	17,000	Truro	11,000
Winchester	17,000	West Bromwich	11,000
Mansfield	16,000	Worthing	11,000
Reigate	16,000	Banbury	10,000
St. Helens	16,000	Bury St. Edmunds	10,000
Windsor	16,000	Chichester	10,000
Cheadle and Gatley	16,000	Cleethorpes	10,000
		Grantham	10,000
		Kettering	10,000
		Stourbridge	10,000

Small Market Towns

Ashford	9,000
Aylesbury	9,000
Bangor	9,000
Barnstaple	9,000
Batley	9,000
Bridgend	9,000
Bridgwater	9,000
Caterham and Warlingham	9,000
Hitchin	9,000
Hoylake and W.Kirby	9,000
Keighley	9,000
Kendal	9,000
Lewes	9,000
Morecambe and Heysham	9,000
Newbury	9,000
Newton Abbot	9,000
Newport (I.O.W.)	9,000
Nuneaton	9,000
Ormskirk	9,000
Penarth	9,000
Penzance	9,000
Pontypridd	9,000
Ramsgate	9,000
Yeovil	9,000
Wellingborough	9,000
Basingstoke	8,000
Bebington and Bromborough	8,000
Berwick on Tweed	8,000
Bishop Auckland	8,000
Bridlington	8,000
Carmarthen	8,000
Chepping Wycombe	8,000
Dorchester	8,000
Grays Thurrock	8,000
Hale	8,000
Hazell Grove and Bramhall	8,000
Nelson	8,000
Newcastle under Lyme	8,000
Oswestry	8,000
Penrith	8,000
Redcar	8,000
Rhyl	8,000
Woking	8,000
Beverley	7,000
Bishop Stortford	7,000
Blyth	7,000
Buxton	7,000
Caernarvon	7,000
Crewe	7,000
East Retford	7,000
Eastleigh and Bishopstoke	7,000
Faversham	7,000
Hertford	7,000
Hyde	7,000
Kidderminster	7,000
Louth	7,000
Lytham St. Annes	7,000
Maidenhead	7,000
Port Talbot	7,000
Skipton	7,000
Trowbridge	7,000
Urmston	7,000
Warwick	7,000
Wisbech	7,000
Aberdare	6,000
Abergavenny	6,000
Benfleet	6,000
Bideford	6,000
Brentwood	6,000
Chorley	6,000
Conway	6,000
Deal	6,000
Dorking	6,000
Harpendon	6,000
Hemel Hempstead	6,000
Horsforth	6,000
Leigh	6,000
Letchworth	6,000
Llandudno	6,000
Long Eaton	6,000
Northwich	6,000
Scunthorpe and Frodingham	6,000
Spalding	6,000
Weymouth and Melcombe Regis	6,000
Wellington (Sal.)	6,000
Widnes	6,000
Wolstanton United	6,000
Workington	6,000
Worksop	6,000
Aldershot	5,000
Andover	5,000
Bognor Regis	5,000
Chester le Street	5,000
Colne	5,000
Evesham	5,000
Falmouth	5,000
Fulwood	5,000
Haverfordwest	5,000

Small Market Towns (Cont.)

Hoole	5,000	Ripon	5,000
Litherland	5,000	St. Austell	5,000
Loughborough	5,000	Sittingbourne and Milton	5,000
Mangotsfield	5,000	Stamford	5,000
Melton Mowbray	5,000	Worsley	5,000
Newark	5,000		
Redruth	5,000		

Town Groups.

Mersey-side.		Manchester District	
Liverpool	515,000	Manchester	515,000
Wallasey	74,000	Salford	114,000
Birkenhead	73,000	Stretford	34,000
Bootle	29,000	Eccles	25,000
Waterloo with Seaforth	19,000	Prestwich	19,000
Great Crosby	12,000	Swinton and Pendlebury	13,000
Hoylake and West Kirby	9,000	Urmston	7,000
Bebington and Bromborough	8,000	Worsley	5,000
Litherland	5,000		
Total	754,000	Total	732,000

Birmingham		Newcastle District	
Birmingham	380,000	Newcastle	153,000
Smethwick	20,000	Gateshead	51,000
West Bromwich	11,000	Gosforth	14,000
Sutton Coldfield	18,000	Total	218,000
Total	429,000		

Cardiff		Nottingham	
Cardiff	154,000	Nottingham	132,000
Penarth	9,000	West Bridgford	18,000
	163,000	Carlton	11,000
		Total	161,000

Brighton		Stoke on Trent	
Brighton	82,000	Stoke on Trent	53,000
Hove	18,000	Newcastle under Lyme	8,000
Total	100,000	Wolstanton United	6,000
			67,000

Grimsby-Cleethorpes	42,000	Chester-Hoole	34,000
Lancaster-Morecambe and Heysham	30,000		
Gillingham-Rochester-Chatham	39,000		
Preston-Fulwood	60,000	Leamington Warwick	18,000